HOW TO MAKE BIG MONEY SELLING BY MAIL

# MECHANIX ILLUSTRATED

THE HOW-TO-DO MAGAZINE

Best Buy 25c JANUARY

THE PUBLIC LIBRARY
DEC 18 1959
ANN ARBOR, MICH.

U.S. Senator Says:

## AUTO RACING IS Murder!

## IT MUST BE OUTLAWED!

PUBLIC LIBRARY
FIFTH AVE AT WILLIAM
ANN ARBOR MICH

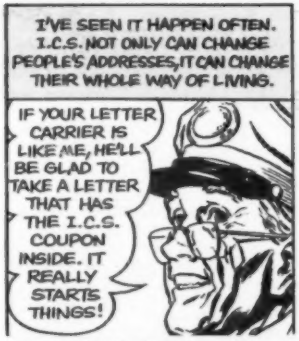
# THE MAILMAN

I REMEMBER THE MORNING I FOUND ANDY SHOLL TRYING TO TAKE ON THE WHOLE NEIGHBORHOOD...
ALL RIGHT, BOYS, WHAT'S THE TROUBLE?
THEY CALLED MY POP A "MUSCLE HEAD" JUST 'CAUSE HE NEVER FINISHED SCHOOL

LOOK, ANDY...YOUR FATHER'S A HARD WORKER. THAT'S SOMETHING TO BE PROUD OF!
YEAH, BUT EVEN DAD SAYS HE'S IN A RUT!

ANDY! YOU'VE BEEN FIGHTING AGAIN! OH, IF ONLY WE COULD LEAVE THIS NEIGHBORHOOD
MAYBE THIS WILL HELP... IT'S FROM INTERNATIONAL CORRESPONDENCE SCHOOLS

SURE ENOUGH, WITHIN A FEW WEEKS I BEGAN TO DELIVER MORE LETTERS AND PACKAGES FROM I.C.S.
WE'RE KEEPING YOU BUSY THESE DAYS. ANDY'S FATHER IS TAKING A CORRESPONDENCE COURSE, YOU KNOW
A SMART MOVE FOR ANY MAN!




# FREE!

**I.C.S. CAREER KIT**

*Send coupon now... get all three books*

1 "HOW TO SUCCEED" 32-PAGE GOLD MINE

2 CAREER CATALOG... OPPORTUNITIES IN YOUR FIELD.

3 SAMPLE LESSON (MATH) SHOWS I. C. S. METHOD.

**For Real Job Security—Get an I. C. S. Diploma!** I. C. S., Scranton 15, Penna. Accredited Member, National Home Study Council

## INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

**BOX 01055M, SCRANTON 15, PENNA.** (Partial list of 250 courses)

Without cost or obligation, send me "HOW to SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (plus sample lesson):

**ARCHITECTURE and BUILDING CONSTRUCTION**
- ☐ Air Conditioning
- ☐ Architecture
- ☐ Arch. Drawing and Designing
- ☐ Building Contractor
- ☐ Building Estimator
- ☐ Carpentry and Millwork
- ☐ Carpenter Foreman
- ☐ Heating
- ☐ Interior Decoration
- ☐ Painting Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

**ART**
- ☐ Commercial Art
- ☐ Magazine & Book Illus.
- ☐ Show Card and Sign Lettering
- ☐ Sketching and Painting

**AUTOMOTIVE**
- ☐ Automobiles
- ☐ Auto Body Rebuilding and Refinishing
- ☐ Auto Engine Tuneup
- ☐ Auto Technician

**AVIATION**
- ☐ Aero-Engineering Technology
- ☐ Aircraft & Engine Mechanic

**BUSINESS**
- ☐ Accounting
- ☐ Advertising
- ☐ Business Administration
- ☐ Business Management
- ☐ Cost Accounting
- ☐ Creative Salesmanship
- ☐ Managing a Small Business
- ☐ Professional Secretary
- ☐ Public Accounting
- ☐ Purchasing Agent
- ☐ Salesmanship
- ☐ Salesmanship and Management
- ☐ Traffic Management

**CHEMICAL**
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Chem. Lab. Technician
- ☐ Elements of Nuclear Energy
- ☐ General Chemistry
- ☐ Natural Gas Prod. and Trans.
- ☐ Petroleum Prod. and Engr.
- ☐ Professional Engineer (Chem)
- ☐ Pulp and Paper Making

**CIVIL ENGINEERING**
- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Professional Engineer (Civil)
- ☐ Reading Struc. Blueprints
- ☐ Structural Engineering
- ☐ Surveying and Mapping

**DRAFTING**
- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Drafting Machine Design
- ☐ Electrical Drafting
- ☐ Mechanical Drafting
- ☐ Sheet Metal Drafting
- ☐ Structural Drafting

**ELECTRICAL**
- ☐ Electrical Engineering
- ☐ Elec. Engr. Technician
- ☐ Elec. Light and Power
- ☐ Practical Electrician
- ☐ Practical Lineman
- ☐ Professional Engineer (Elec)

**HIGH SCHOOL**
- ☐ High School Diploma
- ☐ Good English
- ☐ High School Mathematics
- ☐ Short Story Writing

**LEADERSHIP**
- ☐ Industrial Foremanship
- ☐ Industrial Supervision
- ☐ Personnel-Labor Relations
- ☐ Supervision

**MECHANICAL and SHOP**
- ☐ Diesel Engines
- ☐ Gas-Elec. Welding
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Metallurgy
- ☐ Industrial Safety
- ☐ Machine Design
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Professional Engineer (Mech)
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigeration and Air Conditioning
- ☐ Tool Design ☐ Tool Making

**RADIO, TELEVISION**
- ☐ General Electronics Tech.
- ☐ Industrial Electronics
- ☐ Practical Radio-TV Eng'g
- ☐ Practical Telephony
- ☐ Radio-TV Servicing

**RAILROAD**
- ☐ Car Inspector and Air Brake
- ☐ Diesel Electrician
- ☐ Diesel Engr. and Fireman
- ☐ Diesel Locomotive

**STEAM and DIESEL POWER**
- ☐ Combustion Engineering
- ☐ Power Plant Engineer
- ☐ Stationary Diesel Engr.
- ☐ Stationary Fireman

**TEXTILE**
- ☐ Carding and Spinning
- ☐ Cotton Manufacture
- ☐ Cotton Warping and Weaving
- ☐ Loom Fixing Technician
- ☐ Textile Designing
- ☐ Textile Finishing & Dyeing
- ☐ Throwing
- ☐ Warping and Weaving
- ☐ Worsted Manufacturing

Name_____ Age_____ Home Address_____

City_____ Zone_____ State_____ Working Hours_____ A.M. to P.M._____

Occupation_____

Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd., Montreal, Canada. . . . Special tuition rates to members of the U. S. Armed Forces.

# MECHANIX ILLUSTRATED

A FAWCETT PUBLICATION

W. H. FAWCETT, JR. president — ROGER FAWCETT general manager — ROSCOE K. FAWCETT circulation director
GORDON FAWCETT secretary-treasurer — RALPH DAIGH editorial director
JAMES B. BOYNTON director of advertising — AL ALLARD art director — RALPH MATTISON associate art director

WILLIAM L. PARKER editor — ROBERT G. BEASON assistant editor

LAWRENCE SANDERS.....feature editor
J. ROBERT CONNOR.....news editor
HARVEY GARDNER.....associate editor
HELEN E. SLOWIN....production director
ROBERT BRIGHTMAN home and shop editor
JOHN J. SMITH.....associate editor
DICK HOWE.....associate editor
JOHN WEBSTER eastern advertising manager
LEONARD ULINE .....art editor
WALTER MESAROS .....art associate
VINCENT TROIANO .....art assistant
ED BRANDON .....art assistant

FORTHRIGHT Richard Neuberger, Senator (D) from Oregon, is as outspoken in Congress as he is in MI on the evils of auto racing. The former newspaperman-author sounds off in MI's lead article this month, beginning on page 57. Read Auto Racing Must Be Outlawed! You'll find it a real shocker.

## SPECIAL FEATURES

Auto Racing Must Be Outlawed! *Senator Richard Neuberger* 57
Have New Gun, Will Travel ..... *Robert Hertzberg* 68
Seagoing Saucers ..... *Frank Tinsley* 76
Secrets Of The Mail Order Experts ... *Edmund Gordon* 80

## TOM McCAHILL

Mail For McCahill ..... 65
Tests The '59 Plymouth ..... 84
Coast-To-Coast For Less Than $36 ..... 88

## REGULAR FEATURES

Bright Idea Award: Home Utility Cart ..... 60
Hunting & Fishing: Hunting The Snowshoe Rabbit *Wynn Davis* 70
It's New! ..... 72
MMI: Coffins For Your Pets ..... *Richard C. Redmond* 78
MIMI ..... 79
Inventions Wanted! ..... 92

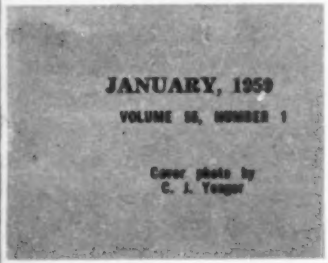
## SHORT FEATURES

Dog Wagon De Luxe ..... 61
The Best At Our National Museum ..... 62
Here's "Velcro"/Flying Syringe/Netting More Cherries 64
Tomorrow's Pens/Making Subs Lighter ..... 66
Baby Aces By The Dozen ..... 67
Your New Phone/The Wonderful Rat/It Finds Metals.. 71
Camera Gun/Automatic Window/Centipede Truck ... 82
New Roto-Jet Helicopter ..... 83
1880 Supermarket ..... 94

## DEPARTMENTS

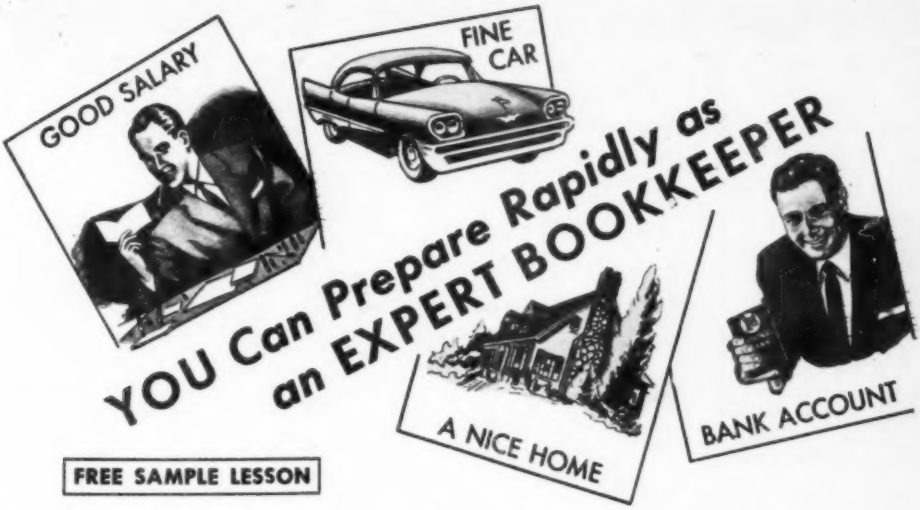
Invention Clinic ..... 24
Dear Editor ..... 28

HOME-CRAFTS-SHOP CONTENTS ON PAGE 6




Permission hereby granted to quote from this issue of this magazine on radio or television, provided a total of not more than 1,000 words is quoted and credit is given to the title of the magazine and issue, as well as the statement, copyright 1958, by Fawcett Publications, Inc.
MECHANIX ILLUSTRATED is published monthly by Fawcett Publications, Inc., Fawcett Building, Fawcett Place, Greenwich, Conn. Editorial offices: 67 W. 44th St., New York 36, N. Y. Advertising offices: 67 W. 44th St., New York 36, N. Y.; 612 N. Michigan Ave., Chicago 11, Ill.; Townsend, Millsap & Co., 159 S. Vermont Ave., Los Angeles 4, Cal. and 110 Sutter Street, San Francisco 4, Cal.; 1659 Guardian Bldg., Detroit 26, Mich.; Hale Printup Assoc., Langford Bldg., Miami 32, Fla. and 4087 Haverhill Drive, N.W., Apt. 10, Atlanta, Ga. Entered as second class matter at the post office at Greenwich, Conn., under the act of March 3, 1879, with additional entry at Louisville, Ky. Printed in U. S. A. Title registered in the U. S. Patent Office.
Copyright 1958 by Fawcett Publications, Inc. Reprinting in whole or in part forbidden except by permission of the publishers.
Address manuscripts to New York editorial office. Unacceptable contributions will be returned if accompanied by sufficient first class postage. Not responsible for lost manuscripts or photos. All remittances and correspondence concerning subscriptions as well as notification of change of address should be addressed to MECHANIX ILLUSTRATED Circulation Dept., Fawcett Place, Greenwich, Conn. Price 25c a copy. Subscription price $3.00 per year in the U. S. and possessions and Canada. All other countries $6.00 per year. Subscription price to members of the armed forces $2.75 per year. Foreign subscriptions and sales should be remitted by International Money Order in U. S. funds payable at Greenwich, Conn.

MEMBER AUDIT BUREAU OF CIRCULATIONS
POSTMASTER: Send Form 3579 to Fawcett Building, Greenwich, Conn.




**FREE SAMPLE LESSON**

IF that's what you want, here's something that will interest you—a short course to quickly prepare you for your start in a successful accounting career. Not a magic formula—not a get-rich-quick scheme—but something substantial, and practical.

Of course, you need something more than just the desire. So, wouldn't it be well worth your while to use some of your leisure time in interesting home study—over a comparatively brief period? Always provided that the rewards were good and thousands upon thousands have found it so.

A Bookkeeper's or Accountant's duties are interesting, varied and of real worth to his employer. He has important standing with his employer.

Why not, like so many before you, investigate LaSalle's modern Problem Method of training for an Accounting or Bookkeeping position?

Through more than 50 years' experience in training hundreds of thousands of successful accountants, including nearly 5,000 CPA's, we have developed a practical training in sound accounting principles and practices, designed to prepare you rapidly for countless numbers of high-paying bookkeeping and accounting positions.

**You, Too, Can Succeed**

The success of LaSalle graduates has resulted from their knowledge and application of the principles acquired through Basic and Practical Accounting, Principles of Accounting and Cost Accounting training, offered in our step-by-step accounting plan. Federal Income Tax is included to qualify you for the many opportunities available to bookkeepers and accountants with this valuable knowledge.

Success in mastering the training is assured through the guidance of expert accountants and CPA instructors. You complete the lessons right in your own home, in your spare time, advancing as rapidly as your time and ability permit. Low cost-easy terms.

Will recognition come? The only answer, as you know, is that success *does* come to the man who is really trained. It's possible your employers will notice improvement in a very few weeks or months. Indeed, many LaSalle graduates have paid for their training—with increased earnings—before they have completed it!

**Get Free Sample Lesson—Also "Opportunities in Accounting"**

For your own good get all the facts about this short course in modern accounting training. Write for Free Sample Lesson—also latest book "Opportunities in Accounting." They will prove that Accounting offers a brilliant future to you and will show the wide range of opportunities that exist today. No cost or obligation. If you want a position of higher income and greater prestige... MAIL THE COUPON NOW!

**ACCREDITED MEMBER, NATIONAL HOME STUDY COUNCIL**

LEU

**SEND FOR FREE BOOK**

***LaSalle Extension University***

***A Correspondence Institution***

**Dept.1493H, 417 S. Dearborn St., Chicago 5, Ill.**

Please send me, free of all cost or obligation, a sample lesson in Accounting... also, your latest illustrated book, "Opportunities in Accounting."

*Name*.....*Age*.....

*Address*.....

*City, Zone, State*.....

# This Tiny German Adding Machine Adds & Subtracts to ONE BILLION!

**1,000 Times Higher than Other Pocket Machines**

## OVER 4,000,000 POCKET ADDERS USED IN FACTORIES, OFFICES, HOMES, ARMY, NAVY & AIR FORCE PERSONNEL!

- Checks Personal & Business Expenses
- Keeps Golf, Bridge & Canasta Scores
- Helps Homeowners, Professionals, Businessmen, Students, Housewives
- Checks Children's Schoolwork
- Adds Sales Slips & Grocery Tapes

Fitted Vinyl Wallet Cases
Lightning Clearing Levers
Fast, Smooth Operation
Enduring Steel Mechanisms

**NEW LOW PRICE 1.98**

Sold Only by Mail, Only by Thoresen's MAIL COUPON!

IT'S HERE at last from Germany—the new 1959 high-speed WIZARD Calculator. Barely larger than a pack of cigarettes. Yet it's precision made with enduring Kerium Steel working parts. This new, high-speed model now subtracts and adds up to ONE BILLION—never makes a mistake! And now—for the first time ever—it has a fitted MAGIC RECKONER for multiplying and dividing INSTANTLY—without paper or pencil. Yet this complete, high-speed calculating system can now be yours for HALF PRICE—only 1.98—direct from importer to you!

**Just Feed it Your Number Problems and the answer pops up—automatically**

This new 1959 high-speed calculator is so easy, so simple to use. All you do is "feed" it your list of figures, small or big, and instantly the correct answer pops up in the 9 tiny windows—AUTOMATICALLY! For multiplication or division use the MULTI-RECKONER and get lightning fast answers. For instance, you divide 39 into 1872—you get the answer in less than 2 seconds! Or multiply 43 by 47 and get your answer (2,021) in just about ONE second. No other pocket adding machine gives you this wonderful plus feature! Other machines costing $3.98 just add up to one million. The WIZARD costs only 1.98 and adds up to 1000 times more—up to ONE BILLION.

**SAVES Time, Work, Money For Entire Family**

This new 1950 high-speed WIZARD saves the entire family time, work, money. Avoids frazzled nerves. Prevents costly human mistakes—because this mathematical marvel can't make a mistake! Adds mountains of numbers in MINUTES—instead of hours. New it's so fast, so easy to check all purchases, statements, even restaurant bills. Keeps a running tab of market purchases as you take food off shelves. Records car mileage. Helps you maintain a budget, figure out your income tax, check children's homework, keep bridge and canasta scores, figure discounts, insurance and stock dividends, salesmen's expenses. The 1959 WIZARD gives you freedom from figuring slavery. Lets you perform scores of everyday adding, subtracting, multiplication and division jobs, easily, without any mental fatigue—without silly mistakes . . . in just seconds!

**Developed in Germany! Used Thruout the World For Home & Business Use!**

The WIZARD is a mechanical marvel developed by German Mathematicians. Human beings can make mistakes, but this machine NEVER DOES! Precision made with genuine Kerium Steel mechanism—no gears, no wheels to wear out . . . virtually lasts a lifetime! That's why over 4,000,000 men, women, even children use this very same type calculator today in business . . . in the home . . . even in government work thruout the world! Four million people can't be wrong! Mail coupon below for 10 days FREE trial. You must be 100% satisfied or YOUR MONEY BACK!

**Mail This Coupon For FREE Trial!**

**THORESEN, Inc., Dept. 10-A-1182**
**585 Water Street, New York 2, N. Y.**

RUSH new 1959, Wizard Calculators, 1.98 each, with carrying wallet and Magic Reckoner on 10 day home trial—satisfaction guaranteed or money back.

☐ Check, cash or M. O. enclosed. Rush postage-paid.
☐ Send C.O.D. plus 49c C.O.D. fee and postage.

PRINT NAME & ADDRESS.....

.....

.....

Canadians: Address 430 King Street West, Toronto 2B, Ont.

**This Type Adding Machine Used by Personnel of Leading Railroads, Oil Companies, Schools, Colleges, Government Bureaus in 48 Countries**

Over 4 million men, women and school children use pocket adding machines in 48 countries. 4,000,000 people can't be wrong! Needed in every home, store, office, factory, engineering firm, school and college. Save time! Save mental fatigue! Save yourself from costly figuring mistakes! Get the new 1959 WIZARD with the Magic Reckoner today!

**Now . . . Multiply and Divide Faster with The Magic Reckoner**

The NEW 1959 WIZARD is the world's only adding machine with the Magic Reckoner. This plus feature lets you multiply and divide too with amazing speed. You pay not 3.98 or 4.98 but only 1.98 for this deluxe WIZARD with fitted VINYL case. Wonderful value, indeed! That's why more WIZARDS are sold than any other pocket adder made.

THORESEN, Inc.,
Dept. 10-A-1182
585 Water Street
New York 2, N. Y.

**SAVE MONEY—AVOID ERRORS AT CHECK-OUT COUNTER!**

Now add your purchases as you take them off the shelves. You know how much you're spending as you go along. Check-out counters are crowded. And you know how fast the clerks tally your purchases. Everybody's human—everybody makes mistakes. Know your bill BEFORE the clerk has punched a single figure on the register!

# Learn at Home IN YOUR SPARE TIME to Fix Electrical Appliances

To build a better future, get into a field where there's much important work and the security that comes from knowing a good trade. Servicing electrical appliances offers that OPPORTUNITY. Every wired home has many electrical appliances and millions and millions of new appliances are sold every year. Owners pay well to keep them in repair. That's making a fast-growing need for trained men.

## Add To Your Income Starting Soon

### Need For Service Technicians Increasing

Make extra money in your spare time. Start soon to fix electric toasters, fans, clocks, vacuum cleaners, and other electric appliances for your neighbors and friends. Work in your basement, garage or spare room. It's easy to increase your earning power—to pay for your training many times over—to have extra money to buy things you need.

## Learn and Earn with Multi-Use Tester Built with Parts We Send

This course includes the parts to build a portable, sturdy Appliance Tester that helps you locate electrical defects quickly and easily. You use it to learn and do actual electrical appliance repair jobs. If you want better pay learn this good trade. No need to give up your present job. You can train at home in your spare time for only $3.00 down and $6.00 a month. A small price to pay for increased earnings, a more secure future. Paste coupon below on a postal or mail in envelope for free book and sample lesson. Address **National Radio Institute, Dept. CA9, Washington 16, D. C.**

***MAILING THIS COUPON MAY START YOU TO SUCCESS***

**LESSON AND BOOK FREE**

**NATIONAL RADIO INSTITUTE, Dept. CA9, Washington 16, D. C.**

Please send me Electric Appliance Training lesson and book free. (No salesman will call.)

Name ..... Age .....

Address .....

City ..... Zone .... State .....

ACCREDITED MEMBER NATIONAL HOME STUDY COUNCIL

# OWN a Nationally Advertised Business

**We'll show you how to earn $8,750 PROFIT first year on just 2 jobs a day . . . personally train you, furnish all equipment.**

Even if employed, enjoy the prestige and financial independence of your OWN business. You will be trained by an established dealer nearby and at a factory-training school. Business quickly established. No shop needed. Employ others, MULTIPLY profits. Business grows from recommendations, repeat orders. Under our guidance you become rug-upholstery cleaning expert. Start part-time if you like. All work done with portable equipment in homes, offices, hotels. Our staff of experts assist you on individual basis to help build your business. In addition, you receive **25** continuous services: **Nat'l Advertising** in McCall's, House & Garden, dozen others. **Trademark Protection, Complete Local Ad Kit, Publicity Program, Monthly Magazine, Laboratory Research & Development, Conventions** and many others.

## FIVE Ways to Make Money

A Duraclean Dealership qualifies you to offer **five** different services. Thus on many jobs you **multiply** profits.
1. **Duraclean:** Unique ABSORPTION process for cleaning rugs, carpets, upholstery. Recommended by leading stores, manufacturers, and backed by famous Parents' Magazine Seal. No scrubbing, soaking, shrinkage. Aerated foam generated by portable electric Foamovator safely removes dirt, grease, unsightly spots. Dries so fast customers use furnishings in few hours. 2. **Durashield:** *soil-retarding* treatment that keeps furnishings clean MONTHS longer. So new you may be *first in town* to offer this type service. 3. **Duraproof:** Protects against damage by moths, carpet beetles. Backed by International 6-year Warranty. 4. **Duraguard:** Flame-proofing treatment which reduces fire damage. Theatres, hotels, homes offer huge potential. 5. **Spotcraft:** Products which enable you to handle most all spot or staining problems.

COMMENDED BY THE CONSUMER SERVICE BUREAU OF PARENTS' MAGAZINE

### Mail Coupon—We Send You FREE Booklets!

A moderate payment establishes your business—pay balance from sales. We furnish equipment, sales material and enough supplies to return TOTAL investment. FREE booklets explain everything! Send coupon today!

**DURACLEAN CO., 9-171 Duraclean Bldg., Deerfield, Ill.**

**"OWN a Business" Coupon**

Duraclean Co., 9-171 Duraclean Bldg., Deerfield, Ill.
Please rush free booklets and letter giving full details of how I may OWN a growing, lifetime business.

Name.....

Address.....County.....

City.....State.....


# MI HOME CRAFTS SHOP

*continued from page 2*

## SPECIAL FEATURES


Get Hi-Fi Out Of Your TV Set..... 96
Measuring Devices .....100
New Tools Drive Nails Into Concrete...116


## HOME AND SHOP


Child's Lamp .....104
Half Basket .....106
Early American Chest .....110
Magnets Around The House.....118
Telephone Dialer .....120
MI's Tie Bar Brooch.....139
A "New" Chair.....141


## PAINTING


Fresh Paint Tips.....115


## BOATING


Radio And Direction Finder.....124


## AUTOMOTIVE


Can You Stop In Time?.....128


## PHOTOGRAPHY


Monthly Photo Contest.....136
Photography Today .....138


## ASTRONOMY


Venus .....143


## DEPARTMENTS


Handy Tips .....108
The Farmer's Page.....114
Golden Hammer Award Winners.....122

These men are getting practical training in... *Electronics*

# ELECTRICITY ELECTRONICS

*On Real:*

**A.C. and D.C. Motors**
**Generators**
**Switchboards**
**Controllers**
**Modern Appliances**
**Automatic Electronic Control Units**

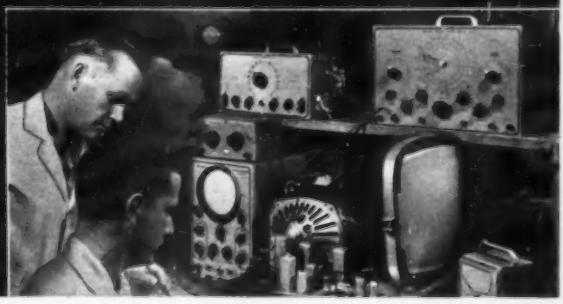
*(Shown at left—Instructor explaining operation and testing of a large Motor Generator in our A.C. Department.)*

# TELEVISION RADIO ELECTRONICS

*On Real:*

**Television Receivers Black & White and Color**
**AM-FM and Auto Radios Transistors—Printed Circuits—Test Equipment**

*(Right — Instructor helping students check the wiring and trace circuits of television receivers.)*



## Train in the NEW SHOP-LABS of COYNE

***Largest, Oldest, Best Equipped School of Its Kind in the U.S.***

Prepare for your future now in today's top opportunity field. Don't be satisfied with a "No Future" job. Train the Coyne way for a better job in a field that offers a world of opportunities in the years ahead.

**You train in Chicago**—the Electronic Center of the World—on real equipment. Professional and experienced instructors show you how, then you do practical jobs yourself. No previous experience or advanced education is needed.

**FINANCE PLAN:** Enroll now, pay most of tuition after graduation. Part-time employment help for students.

**Mail coupon or write** to address below for free book—"Guide to Careers". Whether you prefer Electricity—Electronics, Television-Radio Electronics or Combined Electronics Training, this book describes all training offered and gives facts to Vets and Non-Vets.

**B. W. Cook, Jr., Pres.** **COYNE ELECTRICAL SCHOOL** **Founded 1899**

**CHARTERED AS AN EDUCATIONAL INSTITUTION NOT FOR PROFIT**
**1501 W. CONGRESS PARKWAY, CHICAGO 7 Dept. 19-1A.**
**ELECTRICITY ★ RADIO ★ TELEVISION ★ REFRIGERATION ★ ELECTRONICS**

### Mail Coupon or Write for FREE Book

**Book comes by mail. No obligation and no salesman will call.**

Mail coupon below in an Envelope or paste on a Postal Card or write Address given and Free book, "Guide to Careers", with information will be sent to you by return mail.

**COYNE ELECTRICAL SCHOOL**
**Dept. 19-1A, New Coyne Building**
**1501 W. Congress Pkwy., Chicago 7, Illinois**

Send FREE Book, "Guide to Careers" and details of all training you offer.

NAME.....

ADDRESS.....

CITY.....STATE.....

*(I understand no Salesman will call)*

**Sworn statement from CHAS. LEMMING reads:**

**"After starting my own business**

**I've averaged $100 A DAY —most of it clear profit!"**

• *If you want to be independent—free from layoffs, bosses—start profitable, year'round business of your own.* ***Ours is NOT a lease proposition.*** *You own the machine, you work when and where you please, and all the money you take in is your own.* ***FREE*** *book tells you how.*

**MAIL COUPON TODAY FOR FREE BOOK**

**VON SCHRADER MFG. CO.**
**112 "D" Pl., Racine, Wisconsin**

Without obligation rush your **FREE** booklet about how I can start my own permanent, profitable electric Upholstery Cleaning business.

Name_____

Address_____

City_____ Zone____ State____

***Not everyone does as well... Mr. Lemming owns two machines***

In city of less than 50,000, Mr. Lemming started his own business after filling in coupon like one below. He averaged $100 a day during first year, some days $200. F. E. Doran grossed $1050 in single month. Geo. Held grossed $300 in one week.

How much you earn depends largely on you. No special skill, no large investment required for our electric upholstery cleaning machine. Start spare time until full time justified. Hire helpers as needed.

**NO SHOP NECESSARY** • You clean upholstered furniture on customers' premises—homes, hotels, motels, etc. Auto upholstering, too. No hauling; operate from your home. Watch business grow as satisfied customers tell friends. Supplies cost little, profits high.

---

**HOME STUDY can open the door to a BETTER JOB at BIGGER PAY for YOU**

TODAY, CHOOSE YOUR CAREER! Then take the first easy step toward preparing for the goal you can reach *in spare time at home.* Or, if you are in work you like, learn how you can earn quicker promotions and bigger pay. For 61 years AMERICAN SCHOOL has helped many thousands of ambitious people succeed. Think seriously about the subjects listed. Fill in and mail coupon today.

**AMERICAN SCHOOL, Dept. G128, Drexel at 58th, Chicago 37, Ill.**

Without obligation, send FREE information on the subjects I have checked.

- ☐ Accounting
- ☐ Apprenticeship Courses
- ☐ Architecture & Building
- ☐ Automotive Technician
- ☐ Better Foremanship
- ☐ Blueprint Reading
- ☐ Bookkeeping
- ☐ Business Management
- ☐ Civil Engineering
- ☐ Contracting
- ☐ Diesel Technician
- ☐ Drafting—Building Trades
- ☐ Drafting—Machine Trades
- ☐ Electrical Engineering
- ☐ Electricity—Practical
- ☐ Electronics—Industrial
- ☐ HIGH SCHOOL COURSES
- ☐ Machinists
- ☐ Mechanical Engineering
- ☐ Mechanical Technology
- ☐ Metalworking Course
- ☐ Plumbing—Practical
- ☐ Private Secretary
- ☐ Retail Merchandising
- ☐ Salesmanship—Outside
- ☐ Sheet Metal Work
- ☐ Tool Making

NAME_____ OCCUPATION_____

HOME ADDRESS_____ AGE____

CITY_____ STATE_____

Accredited Member NATIONAL HOME STUDY COUNCIL

---

**EARN MORE - LEARN AUTO DIESEL MECHANICS**

**OR TRAIN WITH OTHER GREER DIPLOMA COURSES**

- ☐ AUTO MECHANICS
- ☐ DIESEL MECHANICS
- ☐ BODY & FENDER REPAIR
- ☐ GAS-ARC WELDING
- ☐ REFRIGERATION
- ☐ AIR CONDITIONING
- ☐ MACHINIST TRADE
- ☐ ADVANCED MACHINIST
- ☐ PIANO TUNING & REPAIR

Skilled men are needed in every part of the country. Earn top pay in established shops or start your own business. Greer's expert instruction and actual shop training teaches you how. You learn by doing—quick, easy courses using the latest tools and equipment. Day, evening and part time instructions available.

Job placement and convenient living accommodations are yours while training. Contact GREER'S FREE JOB PLACEMENT SERVICE when you enroll if you wish part time or full time employment.

**ENGINEERING DEGREE COURSES**

- ☐ DIESEL AUTOMOTIVE ENGINEERING 27 MOS.
- ☐ REFRIGERATION & AIR COND. ENGINEERING 18 MOS.
- ☐ WELDING ENGINEERING 18 MOS.

All Courses Approved ☐ Civ. or ☐ G.I.

Please rush me free literature on the trade indicated, at no obligation.

NAME_____ AGE____

STREET_____

TOWN_____ ZONE____ STATE____

Established 1902

**GREER SHOP TRAINING**

Dept. A, 2232 S. Michigan Ave.
Chicago 16, Illinois

GET FULL FACTS FREE!

Prepare for a Profitable, Exciting Future

# as an Electronics Technician!

## No Previous Technical Experience Required!

Opportunities were never greater for the man who wants to get someplace and be somebody than they are today in the fast-expanding, profitable field of Electronics.

Let us tell you without cost or obligation how you may prepare for a real career in one or more branches of Electronics, either in our well-equipped Chicago or Toronto laboratories—or at home without interfering with your present job. Send coupon for FREE facts today!

### NO ADVANCED EDUCATION NEEDED!

Prepare now for Electronic job opportunities in —

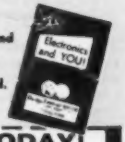
- Radar
- Guided Missile Control
- Computers
- Radio
- Television
- Broadcasting
- Communications
- Remote Control Systems
- Automation Electronics
- Industrial Electronics
- Your Own Service Shop

### AN EXCELLENT OPPORTUNITY FOR MEN 17-55!

Even if you haven't an advanced education, find out how you may prepare in your spare time at home, to enter the BIG OPPORTUNITY field of Electronics. Mail coupon TODAY!

### Sample Booklet FREE!

We'll give you a free copy of an interesting booklet, "Electronics and YOU." See for yourself how you may take advantage of the opportunities in this growing field.




### Free Employment Service

DeVry Tech's Placement Department is in contact with some of the best-known employers in the Electronics field. The service is free to all graduates — and DeVry Tech's record in helping to place men has been outstanding.

### Draft Age?

We have valuable information for every man of draft age; so if you are subject to military service, be sure to check the coupon.

Accredited Member of National Home Study Council

"One of North America's Foremost Electronics Training Centers"

## DeVRY TECHNICAL INSTITUTE

CHICAGO 41, ILLINOIS

Formerly DeFOREST'S TRAINING, INC.

### MAIL COUPON TODAY!

DeVRY TECHNICAL INSTITUTE
4141 Belmont Ave., Chicago 41, Ill., Dept. MI-1-P

Please give me your FREE booklet, "Electronics and YOU," and tell me how I may prepare to enter one or more branches of Electronics as listed above.

Name _____ Age _____
PLEASE PRINT

Street _____ Apt. _____

City _____ Zone _____ State _____

☐ Check here if subject to Military Training.

DeVry Tech's Canadian Training Center is located at 626 Roselawn Avenue, Toronto 13, Ontario

2032

"THE MONEY-SAVING WAY TO MAKE YOUR CAR GLITTER AND GLEAM AGAIN"—CAR LIFE MAGAZINE

# REPLATE AUTO CHROME

RIGHT ON YOUR CAR—WITH PERMANENT PLATING

**IT PLATES AS YOU BRUSH**
*Brings New, Gleaming Beauty to Worn, Dull, even Blistered Chrome Area of Your Car.*

Here at last is the car owner's answer to all chrome problems . . . the way to do actual ELECTROPLATING right on your car—without removing a single part! Not a paint. Not a cheap "over-up." This is GENUINE ELECTROPLATING. You put shining new metal on bumpers, grilles, auto trim—even unplated engine parts, tools, etc. And the plating you apply becomes an INDESTRUCTIBLE PART of the metal itself—forms a hard, sparkling surface that defies all elements! You bring back new-car sparkle, add dollars to your car's value.

**BUMPERS—GRILLWORK—ALL CAR TRIM RESTORED TO NEW BRILLIANCE!**

Here is how easily you replate your car . . . You buff and clean metal with material we supply, then attach SPEEDPLATER'S clamps to your car's battery, dip SPEEDPLATE Brush into miracle solution—and plate on new metal as you move brush! WORKS FAST—yet uses less juice than the tiniest light on your car.

**TESTED—APPROVED BY AUTO MAGAZINES**

MOTOR TREND says: "Matched chrome and was entirely satisfactory." ROD & CUSTOM says: "Speed-Plater can be used to restore scratched, worn or blistered chrome . . . to plate metal not chromed before. We'll vouch for SpeedPlater's doing the job . . . it works exactly as described, giving a lasting, bright, durable coating."

**TRY AT OUR RISK**

If you want to put a new permanent gleam on YOUR CAR'S CHROME—you can do it right away and not risk a dime. If you are not satisfied with great results, it doesn't cost you a penny! You simply return outfit within 30 days in good condition for FULL CASH REFUND. Act now! Plate your own car, tools, etc. MAKE MONEY PLATING OTHER CARS. 8 out of 10 cars on the road today need new plating. You can get all the work you want—and make up to $10 an hour! Send for YOUR SPEEDPLATE OUTFIT NOW. Here's what you get: SpeedPlate Brush with Permanent Anode for lifetime plating; Wires and Clips for battery hookup; enough solutions to plate several cars; Special Buffing Wheels and Compounds; Special Metal Polish; Full, simple instructions. Mail coupon today with only $1 deposit—pay postman $13.95 plus postage when SPEED-PLATER arrives. Or send $14.95 with order and we pay all postage. SAME GUARANTEE EITHER WAY: CASH REFUND IF NOT COMPLETELY SATISFIED.

**EMPIRE MERCHANDISING CO.,**
**4 W. 3rd Ave., Mt. Vernon, N. Y., Dept. JM-19**
Please rush the electroplating kit I have checked
☐ Regular Kit, $14.95 (If C.O.D. send $1 deposit)
☐ Heavy-Duty Service Station Outfit, $34.95 (If C.O.D. send $5 deposit)
☐ I enclose full price, send postpaid.
I understand that I must be COMPLETELY SATISFIED or I may return kit in 10 days for immediate CASH REFUND.

Name _____
Address _____
City _____ State _____

**CAR DEALERS—SERVICE STATIONS MAKE BIG PROFIT WITH SPECIAL HEAVY DUTY OUTFIT**

Now you can make TERRIFIC PROFITS plating right in your own shop! Increase value of used cars—touch up worn chrome, put that new-car look on all cars! Buick Dealer says: "Wonderful. We had excellent results." Outfit used by U. S. Navy, Air Force, biggest U. S. Corporations. Electroplates on current from 12 V. car battery. Entire Outfit COMPLETE, only $34.95—with enough material to plate dozens of cars! Additional supplies always available at rock-bottom prices. Outfit includes Plating Brush with Permanent Anode, Wires and Clips for Battery Connection, Special Buffing Wheels, Compounds, etc., Special Grinding Wheel, Stripping Solution for removing old chromium, Rust Remover, Special Polish, Full Instruction Folder. You quickly make back entire cost on your very first job! MONEY BACK GUARANTEE. Order now. If C.O.D. send $5 deposit.

# NEW RUBBER STAMP BUSINESS PAYS BEGINNERS UP TO $9.20 AN HR.

START AT HOME IN SPARE TIME with Table Top Machine!

The multi-million dollar Rubber Stamp business—once controlled by a few big companies—is now being taken over by small operators—one in each community throughout the United States. Men and Women who have this inexpensive machine can turn out huge quantities of Rubber Stamps with special wording that buyers once were forced to buy from big cities. Material costing only 27c makes a stamp that sells for $1.80. The machine that does the work is simple and easy to operate and it turns out as many as six Rubber Stamps at a time, each with different wording such as names, addresses, notices, stock numbers, prices and other "copy" needed by offices, factories and individuals. Working full capacity, it can earn as much as **$9.20 an hour for the operator!** Now you can get into the big-pay business yourself, with your own home as headquarters. You don't need experience. We supply everything, including complete instructions and eight ways to get business coming in fast. Start making up to $9.20 an hour from the very beginning. Cash in on the profitable Rubber Stamp business in your community, right away. We'll mail full particulars FREE and no salesman will call. Be first in your locality. Rush coupon today or send your name on postcard to

**RUBBER STAMP DIV., Dept. R-4-A**
**1512 JARVIS AVENUE • CHICAGO 26, ILLINOIS**

**RUBBER STAMP DIV.**
**1512 Jarvis Ave., Dept. R-4-A**
**Chicago 26, Illinois**

FREE!

Please rush full particulars about the little machine that can get me started in the profitable Rubber Stamp business at home in spare time. Everything you send me is FREE and no salesman will call.

NAME _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

## Get "The Most" in Pay and Job Security—

# LEARN AIR CONDITIONING

**MAKE HOME YOUR TRAINING SHOP** **& REFRIGERATION**

### You Practice with 23 Kits

You learn fast because CTI sends you 23 kits. Illustration shows heavy-duty ¼ h.p. refrigeration high-side which you will build—and keep. *Only CTI sends these kits.*

### You Get Professional Tools

Here are tools included in just one kit. You get other tools, tubing, much equipment. Tools develop your interest and skill, speed up training.

### You Learn in Easy Stages

Another kit, which includes motor, fan, pulley, service tools. Kits are sent on a planned schedule to help you learn in easy stages. There's no other training like this!

R. C. Anderson
President CTI

**A GOOD JOB, MORE MONEY, BRIGHT FUTURE**—all three can be yours in the Air Conditioning & Refrigeration field! *Thousands of mechanics are needed* to repair and service the 150 million units in use—and the six million air conditioners, freezers and refrigerators that are produced each year. You can earn more money in a better job—if you are trained. For information on how to get this training, *just fill out and mail coupon below.* No obligation!

### A New, Easy Way to Learn in Months

CTI training is quick and effective because it is *practical.* You learn by doing. During the course of your training, you receive 23 big kits, including tools. You practice with these kits, get valuable experience. For instance, *you do 10 complete service and trouble-shooting jobs with CTI kits.* You assemble a heavy-duty, commercial type, ¼ h.p. high side (illustrated at left). You build an air conditioner, refrigerator, freezer or milk cooler—and you keep and use this valuable unit! Only CTI sends you these fine tools and kits—helps you get real *on-the-job* training! And all this fine equipment is yours at *no extra cost!* With CTI training you can *start out* as a mechanic and avoid years of work as a lower-paid apprentice.

### Earn Good Income as You Train, too

CTI training is so practical that students often work in spare time repairing air conditioners and refrigerators. *They add to their income this way.* Some get jobs with local dealers; others work on their own. Many students go in business on graduation. A number get full-time jobs while they're students.

### A Wonderful Opportunity to Be the Boss

If you want to own a business, Refrigeration offers you opportunity for success. Since most jobs are service calls, you can build up a list of potential customers. Very little capital is needed to start.

### Mail Coupon For Two FREE Books

Mail coupon below for two books which give you complete information. One is entitled *Success in Air Conditioning and Refrigeration.* The other is a *Lesson Sample.* Both FREE.

**DO NOT DELAY—MAIL THIS TODAY**

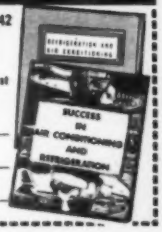
Mr. R. C. Anderson, President — Dept. R-542
COMMERCIAL TRADES INSTITUTE
1400 Greenleaf Ave., Chicago 26, Ill.

Mail me SUCCESS BOOK and LESSON SAMPLE. No cost or obligation.

Name_____ Age_____

Address_____

City_____ Zone____ State_____



# YOU CAN PLAY

# ANY INSTRUMENT

***. . . even if you don't know a single note of music now!***

IMAGINE! Even if you never dreamed you could play . . . you can soon surprise your friends with your musical ability.

No special talent or previous training needed. Clear, simple directions tell you exactly what to do, so you can't go wrong! Spend a few minutes a day—and only a few cents per lesson. Teach yourself piano, guitar, accordion, organ, any instrument. Play popular music, hymns, classical, any other music—by note, quickly. Over ONE MILLION students have taken up music this famous way, including TV Star Lawrence Welk.

**Stop Cheating Yourself of These Joys!**

Popularity! New friends. Gay parties. Good times. Career. Extra Money . . . understand, appreciate, converse about music. Learn lives and compositions of modern and great masters . . . Relax! Banish worries and frustrations. Satisfy self-expression, creative urge. Gain self-confidence.

**MAIL COUPON FOR FREE BOOK**

See for yourself why our method has been successful for 61 years! Read the whole fascinating story of this wonderful method in 36-page illustrated book. For FREE copy, mail coupon. **U. S. School of Music, Studio A221, Port Washington, N. Y.**

**U. S. SCHOOL OF MUSIC**
**Studio A221, Port Washington, N. Y.**

Please send me your 36-page illustrated Free Book. I'm interested in playing (name instrument). .....
☐ I do ☐ I do NOT—have instrument now.

Name .....
(please print)

Address .....

City..... Zone..... State.....

# 8' SPECIALS - $1.25

**FOR PARTIES AND FUN**

**FOR ADVERTISING**

A special purchase makes it possible to offer these GIANT 8 FOOTERS at a fraction of their value. New, genuine neoprene govt. surplus. Great for advertising, paint your message on 'em, inflate & fly. Attracts crowds to sales, displays, openings, stores, gas stations. Fun at home for young & old and just the thing for any party or school prom. Perfect for beach or picnic. They're BIG and they do a BIG job! Order yours today!

**8'—$1.25 . . . 5 for $6.00**
**13'—$1.95, 15'—$2.95, 18'—$3.95**

Postage pd. on ppd orders. Cal. res. add sales tax.

**FRANK SALES . Dept. MI-159**
**3930 Sunset Blvd., Los Angeles 29, Cal.**

# TOOLS WHOLESALE

**$1.00 PUTS YOU IN BUSINESS**

**Start your own business,** sell tools to your friends and neighbors, or buy tools for your own use and **SAVE MONEY $$$**

A MILLION DOLLAR INVENTORY AT YOUR FINGERTIPS. NO STOCK TO CARRY. ORDER AS YOU NEED IT.

**Send $1.** for Tool Catalog today. **BUY AT WHOLESALE PRICES.** Extra $25.00 profit on your accumulated purchases. $1.00 is refunded if you are not 100% satisfied with our offer.

**THOUSANDS!!** of Nationally Advertised items of Hand Tools, Power Tools, Machinist Tools, Tool Chests, Paint Sprayers, Light Fixtures, Appliances, Guns, Gifts, Toys and other items too numerous to mention.

**WE SHIP COAST TO COAST**
**Wholesale Discounts up to 50% OFF**

**SILVO HARDWARE CO.,** Dept. MI-1, **107 Walnut St., Phila. 6, Pa.**

# MAIL ORDER BUSINESS

**How to Start a Profitable Business of Your Own at Home or in a Small office.** Amazing new instruction course shows you how to run a good mail order business, spare time or full time. Up-to-date, practical training—a treasure-house of the best plans and practices being used TODAY by successful operators. **Only $5.95, Complete—Satisfaction Guaranteed!** This is BIG. You get 34 money-making lessons in 5 separate volumes, all in one shipment. You must be satisfied or your money back immediately. Full price only $5.95, postpaid—or C O D plus postage. Nothing more to pay! Order "Mail Order Course" today.
**Nelson-Hall Co., 210 S. Clinton St., Dept. 9AR-3, Chicago 6, Ill.**

**A POSTCARD CAN PUT YOU IN A FINE BUSINESS!**

**Rush Card TODAY for FREE OUTFIT!**
Get into highly profitable, repeat-order shoe business! Sell new line of Air-Cushion comfort shoes to friends, neighbors, folks at work! Over 210 dress, sport, work, safety shoe styles for men, women. Never sold by stores. Just 2 easy orders a day—in spare time—bring you $217 extra income a month! No investment. Rush name and address TODAY for FREE SELLING OUTFIT!
MASON SHOE, Dept. F-471, Chippewa Falls, Wis.

# Shrinks Hemorrhoids New Way Without Surgery Stops Itch—Relieves Pain

For the first time science has found a new healing substance with the astonishing ability to shrink hemorrhoids and to relieve pain — without surgery.

In case after case, while gently relieving pain, actual reduction (shrinkage) took place.

Most amazing of all — results were so thorough that sufferers made astonishing statements like "Piles have ceased to be a problem!"

The secret is a new healing substance (Bio-Dyne*)—discovery of a world-famous research institute.

This substance is now available in *suppository* or *ointment form* under the name *Preparation H.** Ask for it at all drug counters—money back guarantee. *Reg. U.S. Pat. Off

NOW! at a price you can afford!

# MAKE MORE MONEY in TELEVISION RADIO-ELECTRONICS

**BETTER...MORE COMPLETE...LOWER COST... WITH NATIONAL SCHOOLS SHOP-METHOD HOME TRAINING!**

**BETTER...** Training that is proved and tested in Resident School shops and laboratories, by a School that is the OLDEST and LARGEST of its kind in the world.

**MORE COMPLETE...** You learn ALL PHASES of *Television-Radio-Electronics.*

**LOWER COST...** Other schools make several courses out of the material in our ONE MASTER COURSE . . . and you pay more for less training than you get *in our course* at ONE LOW TUITION!

These two FREE books will show you how!

You get all information by mail . . . You make your own decision . . . at home! NO SALESMAN WILL CALL

## TOP PAY...UNLIMITED OPPORTUNITIES LIFETIME SECURITY CAN BE YOURS!

You are needed in the Television, Radio, and Electronics industry! Trained technicians are in growing demand at excellent pay— in ALL PHASES, including Servicing, Manufacturing, Broadcasting and Communications, Automation, Radar, Government Missile Projects.

**NATIONAL SCHOOLS SHOP-METHOD HOME TRAINING,** with newly added lessons and equipment, trains you in your spare time at home, for these unlimited opportunities, including many technical jobs leading to supervisory positions.

**YOU LEARN BY BUILDING EQUIPMENT WITH KITS AND PARTS WE SEND YOU.** Your National Schools course includes thorough *Practical* training—YOU LEARN BY DOING! We send you complete standard equipment of professional quality for building various experimental and test units. You advance step by step, perform more than 100 experiments, and you build a complete TV set from the ground up, that is yours to keep! A big, new TV picture tube is included at no extra charge.

**EARN AS YOU LEARN.** We'll show you how to earn extra money right from the start. Many of our students pay for their course—and more—while studying. So can you!

**LESSONS AND INSTRUCTION MATERIAL ARE UP-TO-DATE, PRACTICAL, INTERESTING.** Every National Schools Shop-Method lesson is made easy to understand by numerous illustrations and diagrams. All instruction material has been developed and tested in our own Resident School Shops, Laboratories and Studios.

**SEND FOR INFORMATION TODAY** . . . it can mean the difference between SUCCESS and failure for you! Send for your FREE BOOK "Your Future in Television-Radio-Electronics" and FREE Sample Lesson. Do it TODAY, while you are thinking about your future. It doesn't cost you anything to investigate!

**GET THE BENEFITS OF OUR OVER 50 YEARS EXPERIENCE**

Approved for GI Training

MEMBER

### YOU GET...

- 19 Big Kits—YOURS TO KEEP!
- Friendly Instruction and Guidance
- Job Placement Service
- Unlimited Consultation
- Diploma—Recognized by Industry
- EVERYTHING YOU NEED FOR SUCCESS!

**SHOP-METHOD HOME TRAINING COVERS ALL PHASES OF INDUSTRY**

1. Television, including Color TV
2. Radio AM & FM
3. Electronics for Guided Missiles
4. Sound Recording and Hi-Fidelity
5. FCC License
6. Automation and Computers
7. Radar & Micro-Waves
8. Broadcasting and Communications

### RESIDENT TRAINING AT LOS ANGELES

If you wish to take your training in our Resident School at Los Angeles, the world's TV capital, start NOW in our big, modern Shops, Labs, and Radio-TV Studios. Here you work with latest Electronic equipment . . . professionally installed . . . finest, most complete facilities offered by any school. Expert, friendly instructors. Personal attention. Graduate Employment Service. Help in finding home near school . . . and part time job while you learn. Check box in coupon for full information.

**NATIONAL SCHOOLS**
Los Angeles 37, Calif.

**NATIONAL TECHNICAL SCHOOLS**
WORLD WIDE TRAINING SINCE

MAIL NOW TO
NATIONAL SCHOOLS, Dept RA-19
4000 S. FIGUEROA ST. LOS ANGELES 37, CALIF.

Rush free TV-Radio "Opportunity" Book and sample lesson. No salesman will call.

NAME _____ AGE _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
☐ Check if interested ONLY in Resident School training at Los Angeles.
VETERANS: Give date of Discharge _____

# 94.6% OF BAILEY GRADUATES ARE EMPLOYED AT TOP PAY IN THE FIELDS WHICH THEY WERE TRAINED!

## DIESEL-AUTO MECHANICS DESPERATELY NEEDED!

We have a far greater demand for our students than we can fill!
We can show you an actual waiting list of leading companies throughout the world who have tried Bailey graduates — found them outstanding, and are coming back for more!
Bailey Graduates are Successful . . . RECEIVE BIG PAY — HAVE SECURE FUTURE!

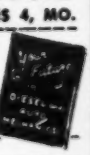
**The Famous Bailey Course prepares you for BOTH Diesel and Gasoline Mechanics.**

This is a must-due to the advent of using Diesel principles, such as 'Fuel Injection' on passenger cars . . . use of gasoline engines for starting Diesel engines, etc. You learn all this at Bailey in the amount of time ordinarily required to learn just one of these subjects, ALL FOR THE PRICE OF ONE.
Don't be satisfied with a 'futureless', one-type job — learn how you can make big money now!
Write today for Free Booklet that takes you on a step-by-step camera tour through our spacious, modern shops — See Bailey students in action as they Learn-by-doing with the Famous Bailey Method of training!
We provide you with housing and part time jobs while in school, plus nation-wide placement service for graduates.

## BAILEY Technical SCHOOLS

1652 S. GRAND ST. LOUIS 4, MO.

**MAIL TODAY!**
Please mail immediately this free booklet without obligation.



Name.....
Address.....
City..... State.....
APPROVED FOR VETERAN . . . NON-VETERAN



# $1 BRINGS YOU $18

**Discover Flok-Kraft and Earn $$$$$ AT HOME**

Earn up to $15.00 per hour spare time. Amazing new Velvet-fiber spray instantly makes any object (Lamps, Radio & TV Cabinets, Figurines, Signs, Auto dash boards, toys, furniture, draperies—anything) worth expensive $$$$$ Prices . . . like magic, you can spray anything with this beautiful new suede-like finish that feels like rich Velvet.

**EARN UP TO $300.00 PER WEEK SPARE TIME**

Imagine, materials cost only 3c per square foot. (Average TV or radio cabinet can be beautifully sprayed with this startling new 3-dimensional Velvet finish in 15 minutes at a cost of only 34c in materials. Your charge for this job is at least $10.00.)

**REPRESENTATIVES IN YOUR AREA URGENTLY NEEDED**

Own your own business. Work at home in your spare time. Help fill the huge growing demand for this amazing new beautiful Velvet-fiber finish. Orders come from stores, offices, homes, architects, auto dealers,—everywhere. Possible $20,000,000.00 worth of jobs to be done. Investigate today—be first in your area!
Actual samples in 16 Radiant Colors. Booklet of 50 Home Business Opportunities and Confidential Details all sent free! Send no money. Write: Coast Industries, Los Angeles 61, Calif., Dept. M-1.



# SHINE WITHOUT 'POLISH'

**Cars Gleam Like Mirror**

MEN! WOMEN! So easy a child can do it! Amazing "Dry" Polisher puts mirror-like shine on car WITHOUT 'POLISH'. No messy pastes, liquids, sprays. Simply glide over car. PRESTO! Leaves hard, lustrous, long-lasting protective Wax Coating. Take orders! Earn money!

**SAMPLES FOR TRIAL**

Sample offer sent immediately to all who send name at once. Just a postcard will do. SEND NO MONEY—just your name.

KRISTEE CO., Dept. 755, Akron 8, Ohio

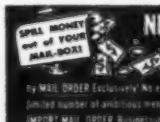


# BECOME AN EXPERT IN TRAFFIC

Traffic men earn $4,000 to $10,000 and up. Thousands of firms need experts on rates, tariffs, regulations. We train you thoroughly in spare time at home for executive traffic jobs. Personal training under traffic authorities. Placement counsel and help. Write for free 48-page book "Traffic Management—the Fast Growing Profession."

LASALLE Extension University, 417 So. Dearborn St.
A Correspondence Institution Dept. 1493-T Chicago 5, Ill.






# NEW! IMPORT-Mail Order

PROFITUNITY — START AT HOME
Sell RARE EXOTIC IMPORTS

by MAIL ORDER Exclusively. No experience required, no face to face selling. We want a limited number of ambitious men and women to participate at home in a new, exclusive IMPORT MAIL ORDER Business opportunity. We do all IMPORTING, furnish exclusive literature, names, addresses, and fill orders for you. All you do is mail for us and receive money coming direct to your own mail box. Hurry, for Big Profits.
MAIL ORDER DISTRIBUTORS, Import Franchise Division

15201 South Broadway Dept. C-1, Los Angeles 61, Calif.



# FREE! 1959 Lafayette Catalog

NEW! 260 GIANT-SIZED PAGES EMBRACING "EVERYTHING IN ELECTRONICS"

Send for this value-packed catalog featuring the newest and finest in Stereo Equipment, Hi-Fi Systems, Tape Recorders, P.A., Electronic, Radio and TV Parts, Tubes, Antennas, Transistor Kits and Miniature Components, Tools, Books, Telescopes, Microscopes, and Amateur Gear—ALL AT BIGGEST SAVINGS EVER! A "must" for the economy minded hi-fi lover, experimenter, hobbyist, engineer, serviceman and dealer.

FULL OF BEST BUYS!
SEND FOR YOUR FREE COPY TODAY

Name.....
Address.....
City..... Zone..... State.....
PASTE ON POSTCARD AND MAIL

Lafayette Radio Dept. TA P.O. BOX 511 JAMAICA 31, N. Y.

# Earn BIG MONEY

## Learn ELECTRIC APPLIANCE REPAIRING At Home In Your Spare Time!

**WE FURNISH YOU THIS AMAZING ELECTRONIC KIT**

**WE GIVE YOU ALSO THE CERAMIC HEATER KIT**

### START YOUR OWN BUSINESS

There are millions of electrical equipment units in daily use in factories, homes, office buildings and on farms. Skilled electrical technicians are needed to keep this equipment in good running condition. Learn at home in your spare time.

### $5.00-$6.00 PER HOUR

is often charged for making ordinary repairs. We show you how to repair refrigerators, vacuum cleaners, washing machines, motors, factory equipment, electrical farm equipment, do house wiring, etc.

**BEGIN IN YOUR OWN KITCHEN, BASEMENT OR GARAGE.** You don't need elaborate fixtures or expensive equipment to be a successful repairman. Work as many hours as you wish. The Electrical Appliance Technician is his own boss!

**IF YOU ARE MECHANICALLY INCLINED,** can hold and use tools, we will give you the training and time saving kits—a multi-purpose CHRISTY ELECTRONIC KIT whose dials show you exactly where the trouble lies with electrical equipment that does not work properly—a CERAMIC HEATER KIT that enables you to wire your own heating elements and pocket all of the profits for yourself—LESSON MANUALS written in simple, easy-to-understand language profusely illustrated showing step-by-step repair shortcuts—all of which give you the Know-how for making more money and how to get financial security.

"All CTS graduates are entitled to CTS lifetime advisory service."

R. S. Fraser, President

**YOU ALSO LEARN** how to build power tools from spare parts, how to solicit business and keep business coming in, what to charge your customers, etc. Thousands of CHRISTY graduates in all parts of the world prove the value of CTS Training. WRITE FOR SPECIAL PAY LATER FORM.

**CHRISTY TRADES SCHOOL, 3214-16 W. Lawrence Ave., Dept. A-6906 Chicago 25, Ill.**

**SEND FOR OUR NEW 32 PAGE CATALOGUE!**

**MAIL THIS COUPON TODAY!**

**CHRISTY TRADES SCHOOL, Dept. A-6906**
**3214-16 W. Lawrence Ave., Chicago 25, Ill.**

Gentlemen:

Please rush me your FREE ILLUSTRATED BOOK about Electrical Appliance Servicing, facts on your Electronic Kit and Special form for paying later from earnings while learning.

Name _____ Age _____

Address _____

City _____ Zone _____ State _____

# EARN MORE...LEARN MORE with THESE NEW

## WHAT ALL AUTO MECHANICS WANT TO KNOW

This Big Practical Book gives full information, with working diagrams, covering the principles, construction, ignition, service and repair of modern cars, trucks and buses.

**Diesel Engines, Hydromatic and Fluid Drives Fully Explained.**

A complete guide of 1696 Pages, with over 1300 Illustrations showing inside views of working parts, with instructions for service jobs. Completely up-to-the-minute! Priced at only $6.

CIRCLE No. 1 IN COUPON

## KNOW YOUR TRUCK

The TRUCK & TRACTOR GUIDE for Mechanics & Drivers, Foremen, Garagemen, Helpers, Owners, Trouble Shooters, Farmers, etc. Covering Gas & Diesel Motor Principles – Construction – Operation – Maintenance – Repair – Brakes – Service of all Parts. 1376 Pages. FULLY ILLUSTRATED. Index. Only $5.

CIRCLE No. 5 IN COUPON

## PLUMBERS AND STEAMFITTERS GUIDES

For Master Plumbers, Journeymen and Apprentice Steamfitters – Gas Fitters and Helpers, Sheet Metal Workers, Draughtsmen, Master Builders, Engineers and all Building Trade Students.

Practical Trade Assistant & Reference Set. Explains in plain language and by clear illustrations, diagrams, charts, graphs and pictures the principles of modern plumbing practice including Pipe Fitting and Air Conditioning. 4 Vols. – 3624 Pages – 3642 Diagrams & Illustrations. Only $8 for the complete set of 4 vols.

CIRCLE No. 6 IN COUPON

## HOUSE HEATING

### Including Ventilating and Air Conditioning

For Heating, Ventilating and Air Conditioning Engineers, Plumbers, Maintenance Men, Contractors, Building Superintendents and Mechanics seeking practical, authentic information on Heating, Ventilating, Air Conditioning. Explains the working principles of all Modern House Heating, Ventilation and Air Conditioning systems. Fully illustrated and indexed. This up-to-date book of reference gives answers to 1001 questions. Over 1000 Pages. Over 1000 Illust. Priced at only $5.

CIRCLE No. 41 IN COUPON

## ELECTRIC DICTIONARY

**Audels New Electric Science Dictionary defines more than 9,000 words, terms and phrases in plain language.**

It has been compiled with that same high standard of accuracy and thoroughness, which has characterized Audel books for more than half a century. You will find this book valuable as an Encyclopedia of Electricity and related subjects, as well as a very comprehensive modern dictionary. With this book at hand, you need not be in doubt as to the meaning and use of any word, term or phrase used anywhere in the realm of Electrical Science. 500 Pages. Priced at only $3.

CIRCLE No. 36 IN COUPON

## MECHANICAL DRAWING

**A concise Drawing Course and a complete instructor or reference work on mechanical drawing.**

The explanations are simple and direct, teaching the student to develop his own power. 192 pages, six subject divisions, 50 plates, size 6 x 9.

CHAPTERS: — Drawing Tools and Their Use; Drafting Room and Shop Practice; Laying Out Sheets and Lettering; Important Rules for Working Drawings; Three Views and Isometric; Simple Models; Joints and Carpentry Work; Machine Drawing; Projections; Sections; Intersections; Warped Surfaces; Method of Plan of Elevation; Method of Vanishing Point; Shades and Shadows; Points, Lines and Planes; Prisms and Pyramids; Spheres. 192 Pages. 50 Plates. Priced at only $2.

CIRCLE No. 31 IN COUPON

## WIRING DIAGRAMS

This book gives the practical facts on wiring of electrical apparatus. It explains clearly and SIMPLY how to wire apparatus for all fields of electricity. Each diagram is complete and self-explaining. Know your HOOK-UPS! 304 Pages. Illustrated. Only $2.

CIRCLE No. 13 IN COUPON

## TELEVISION & RADIO SERVICE LIBRARY

### TELLS HOW TO ANSWER RADIO T.V. QUESTIONS

HERE IS LATE INFORMATION IN A HANDY FORM FOR RADIO AND TELEVISION REPAIRMEN, SERVICEMEN AND STUDENTS

TWO COMPLETE VOLUMES – 1568 Pages – 1085 Illustrations and Diagrams. 1001 Important Facts and Figures on Modern T.V., Radio, Electronic Devices. INCLUDES TRANSISTORS & Transistors Circuits, Rectifiers, Record Changers, P.A. Systems, Phonograph Pick-ups, F.M., Auto Radio, Short Wave, Basic principles, Construction, Installation, Operation, Repairs, Trouble Shooting, How to get Sharp, Clear T.V. Pictures. Install Aerials, How to Test. Explains COLOR SYSTEMS, Methods of Conversion, Terms, etc. Includes Ultra High Frequency. Quick ready reference or use as a home study course. Only $8 for BOTH volumes.

CIRCLE No. 3 IN COUPON

## PUMPS

**A new, modern comprehensive Guide for Engineers, Designers, Pump Operators, Maintenance men, Inspectors, Superintendents and Mechanics. A Library in one volume with Questions and Answers.**

PUMPS—Section A—All types—Centrifugal—Rotary—Reciprocating Pumps: Their Theory, Construction, Operation and Calculations. Air and Vacuum Chambers—Power Pumps—Air Pumps—Jet Condensers—Surface Condensers—Condenser Auxiliaries—Condenser Operation—Calculations—Cooling Ponds—Cooling Towers—Water Supply—Hydraulic Rams—Special Service Pumps—Automotive Fire Pumps—Dredges—Codes.

HYDRAULICS—Section B—Hydraulic Physics—Drives—Machine Tool Power—Accumulators—Elevators—Air Plane Control—Automobile Brakes—Shock Absorbers—Presses—Turbines.

AIR COMPRESSORS—Section C—Compression of Air—Compressor Classification—Parts, Types—Inter and After Coolers—Regulating Devices—Installation—Lubrication—Operation—Maintenance—Blowers—Super-chargers—Pneumatic Hand Tools.

THREE BIG BOOKS IN ONE. 1760 Pages. Illustrated. Priced at only $6.

CIRCLE No. 40 IN COUPON

## POWER PLANT ENGINEERING

For All Engineers, Firemen, Water Tenders, Oilers, Operators, Repair Men and Apprentices for Engineer's License Examinations.

Covering Theory, Construction and Operation of Power House Machinery including Steam Boilers, Engines, Turbines, Auxiliary Equipment, etc.

**1001 FACTS**

**A Complete Steam Engineer's Library in One Book—65 CHAPTERS—2700 Ready Reference Index Listings**

PRACTICAL INFORMATION IN HANDY FORM FEATURING: Basic Principles—Air—Water—Steam—Heat—Fuels—Combustion—How a Boiler Makes Steam—Boiler Types—Nature of Boilers—Boiler Materials—Properties of Boiler Materials—Tests of Boiler Materials—Shell Boiler Construction—Shell Boiler Openings—Water Tube Boiler Construction—Strength of Boilers—Boiler Fixtures and Attachments—Boiler Accessories—Boiler Operation—Boiler Repairs—Boiler Calculations—Boiler Feed Pumps—Feed Water Heaters—Economizers—Feed Water Deaeration—Feed Water Treatment—Feed Water Regulators—Injectors—Steam Traps—Safety Valves—Draught—Mechanical Stokers—Pulverized Coal Systems—Oil Burners—Condensers—Condenser Calculations—Steam Jet Air Ejectors—Cooling Ponds and Towers—Evaporators—Big Boilers—House Heating Boilers—Steam Heating Systems. 1388 Pages. 1700 Illustrations. Only $5.

CIRCLE No. 37 IN COUPON

## ELECTRIC POWER CALCULATIONS

**For Electrical Engineers—Electricians—Testers—Draftsmen—Plant Superintendents—System Planning Engineers and Operators—Radio Men—Students—IN 2 PARTS (AC-DC) 25 CHAPTERS.**

Covering Electrical Units—Ohm's Law—Circuits—Battery e.m.f's and Kirchoff's Law—Units of Area and Resistance—Temperature Coefficient of Resistance—Power, Energy and Thermal Units — D.C. Transmission Line Calculations — Magnetic Circuits—D.C. Machinery—A.C. Fundamentals — Condensers — Power in A.C. Circuits — Resistance, Inductance and Capacitance in Series—Calculations of Parallel Circuits — Complex Quantities — Measurement of Power — Power Factor Correction — A.C. Transmission Lines — Transformers. 425 Pages. 301 Illus. Priced at only $3.

CIRCLE No. 35 IN COUPON

## FIX GAS and ELECTRIC HOME APPliANCES

REFRIGERATORS WASHERS TOASTERS DRYERS IRONERS RANGES VACUUMS FREEZERS

*Many other GAS AND ELECTRIC APPLIANCES*

Handy Reference for Electric & Gas Servicemen, Mechanics, Dealers and Homeowners. Explains clearly and simply how to locate troubles, how to test, reassemble and connect. Wiring diagrams. 1000 Facts. Easy to read. Answers ALL your questions. 864 Pages. Illustrated. Only $6.

CIRCLE No. 2 IN COUPON

## NEW MACHINISTS AND TOOLMAKERS HANDBOOK

MODERN MACHINE SHOP PRACTICE—5 PRACTICAL BOOKS IN ONE. New from cover to cover. Tells how to set up and operate lathes, screw and milling machines, shapers, drill presses and all other machine tools. A COMPLETE INSTRUCTOR AND REFERENCE BOOK. 1728 Pages. Fully Illustrated. Priced at only $6.

CIRCLE No. 12 IN COUPON

## SHEET METAL PATTERN LAYOUTS

### BRAND NEW 1958 EDITION

A practical, illustrated Encyclopedia in 10 sections covering all phases of sheet metal work including Pattern Cutting, Pattern Development and shop procedure — Developed by experts for sheet metal workers, layout men, mechanics, artisans, apprentices and students.

10 BIG SECTIONS, Covering Heating and Air Conditioning Duct Patterns—Special Sheet Metal Layouts—Layouts for various sheet metal shapes—Conductors, Leaders and Leader Head Layouts—Gutters and Roof Outlet Layouts—Sheet Metal Roofing Patterns—Skylights and Louvers—Pattern Layouts—Cornice Pattern Layouts—Sheet Metal Boat Patterns—Geometrical Problems, Mensuration and Sheet Metal Mathematics. 1152 Pages. 350 Layouts. 1600 Illust. Only $7.50.

CIRCLE No. 29 IN COUPON

## SHEET METAL WORKERS HANDY BOOK

11 Sections containing Practical Inside Information, Essential and Important Facts and Figures. Easy to Understand. Fundamentals of Sheet Metal Layout Work. Clearly written in everyday language.

1. Aircraft Sheet Metal Work
2. Principles of Pattern Cutting
3. Sheet Metal Work Layout
4. Development of Air Conditioning Ducts
5. Sheet Metal Machines
6. Welding Sheet Metal
7. Boiler Plate Work
8. Practical Drawing
9. How to Read Plans
10. Geometrical Problems
11. Mensuration

448 Pages. Fully Illustrated. Indexed. Priced at only $2.

CIRCLE No. 30 IN COUPON

## OIL BURNERS

New, complete, explaining in detail both domestic and industrial oil burners. Includes electrical hook-ups and wiring diagrams. Fully covering the theory, construction, installation, operation, adjusting, servicing and repair of all equipment. Indexed for ready reference. Over 416 Pages. 320 Illustrations and Diagrams. Only $2.

CIRCLE No. 28 IN COUPON

## ELECTRICIANS EXAMINATIONS

**A PRACTICAL BOOK TO HELP YOU PREPARE FOR ALL GRADES OF ELECTRICIANS LICENSE EXAMINATIONS.**

A Helpful Review of all the fundamental principles underlying each question and answer needed to prepare you to solve any new or similar problem, which while being asked differently still calls for the same answer and knowledge. Covering the National Electrical Code. Questions and Answers for License Tests; Ohm's Law with applied Examples; Hook-ups for Motors; Lighting and Instruments. Pocket Size. A Complete Review for all Electrical Workers. 250 Pages. Fully Indexed and Illust. Priced at only $2.

CIRCLE No. 34 IN COUPON

## ENGINEERS EXAMINATIONS

PRACTICAL ENGINEERING IN A HANDY FORM COVERING Boiler Room Physics — Steam — Fuels and Combustion — Vaporization—Boiler Facts—Shell Boilers—Water Tube Boilers—Boiler Construction—Boiler Calculations—Boiler Accessories — Mechanical Stokers—Pulverized Coal Systems —Oil Burners—Boiler Installation —Boiler Firing—Feed Water Tending—Cutting In—Boiler Repairs—Low Pressure Boilers—Pipe Fitting—Heating Calculations—Steam Engines—Valve Setting—Arithmetic of the Steam Engine—Turbines—Condensers—Steam Jet Air Ejectors—Cooling Ponds and Towers—Evaporators—Air Compressors—Compressor Operation—Gas Engines. Over 500 Pages. Fully Illustrated. Price at only $2.

**QUESTIONS & ANSWERS**

An aid for stationary, steam, diesel and hoisting engineers' examinations for all grades of licenses. A new concise review explaining the principles of practical engineering. Indexed.

CIRCLE No. 38 IN COUPON

# AUDEL GUIDES for MECHANICS & ENGINEERS

## MASONS & BUILDERS GUIDES

A PRACTICAL ILLUSTRATED 4 VOL. SET—Explaining in clear, simple language and profuse illustration, principles, advances, short cuts, trade secrets, based on modern practice—including how to figure and calculate various jobs. Vol. 1—Brick work, bricklaying, bonding, design. Vol. 2—Brick foundations, arches, tile setting, estimating. Vol. 3—Concrete mixing, placing forms, reinforced stucco. Vol. 4—Plastering, stone masonry, steel construction, blueprints. 4 Vols. 1440 Pages. 2067 Illustrations. Complete Set only $8.

CIRCLE No. 36 IN COUPON

## MATHEMATICS MADE EASY

A COMPLETE HOME STUDY COURSE—Starting with the first principles of arithmetic, advancing step by step through the various stages of mathematics, including the rules and calculations for mechanical and electrical problems. New EASY correct methods. Includes plane and solid geometry, trigonometry, algebra, calculus, etc. Practical tests, reference tables and data. How to use slide rule. 752 Pages. 550 Illustrations. Priced at only $3.

CIRCLE No. 11 IN COUPON

## ELECTRIC MOTORS

THIS GUIDE covers the construction, hookups, control, maintenance and trouble shooting of all types of motors. Includes armature winding. Explains new subject in great detail in simple language. Over 1056 Pages of information. 617 Diagrams. All types of motors fully illustrated and indexed for ready reference. Priced at only $5.

CIRCLE No. 27 IN COUPON

## OPERATING ENGINEERS LIBRARY

**The Master Set for all Stationary, Steam, Diesel and Hoisting Engineers, Firemen, Water Tenders, Oilers, Boiler Operators and Repair Men.**

A gold mine of daily practical help. A self-educating Study Course for the student; or a standard reference work for the Chief. Thousands of rules, tables, calculations and diagrams. Easy to read and learn the latest inside information on theory and practice of modern engineering. Thousands of short-cuts!

VOL. 1—POWER PLANT ENGINEERS GUIDE—Includes: Boilers; all types; Boiler & Engine Room Physics; Fireman's Guide; Boiler Examination Questions; Boiler Operation; Pulverized Coal Systems; Feed Water Heaters; Economizers; Injectors; Safety Valve Calculations; Mechanical Stokers; Oil Burners; Condensers; Air Pumps & Air Ejectors; Evaporators; Steam & Hot Water Heating; Pipe Fitting; Steam Engines; Valve Gears; Turbines; Compressors; Hoists; Gas & Diesel Engines; Lubrication.

VOL. 2—HANDY BOOK OF PRACTICAL ELECTRICITY—Includes: Maintenance of Electrical Machinery; AC & DC Motors; Armature Winding & Repair; Wiring Diagrams; House Lighting; Power Wiring; Cable Splicing; Meters; Batteries; Transformers; Elevators; Electric Cranes; Railways; Bells; Sign Flashers; Telephone; Ignition; Radio Principles; Refrigeration; Air Conditioning; Welding.

VOL. 3—QUESTIONS & ANSWERS—An Aid for Stationary, Steam, Diesel & Hoisting Engineers Examinations for all grades of Licenses. A concise review explaining in detail the Principles, Facts & Figures of Practical Engineering. Fully indexed for ready reference.

3-Vol. Set. 4,000 Pages. Fully Illustrated. Priced at only $12.

CIRCLE No. 39 IN COUPON

## CARPENTERS AND BUILDERS GUIDES

PRACTICAL STOREHOUSE OF MODERN CONSTRUCTION INFORMATION (4 vol. set) for carpenters and all woodworkers. Explains in easy language and by profuse illustration principles, advances, short cuts, trade secrets, all based on the NEWEST information.
Vol. 1—Tools, steel square, saw filing, joints, furniture, etc.; Vol. 2—Builders' mathematics, drawing plans, specifications, estimates, etc.; Vol. 3—House and roof framing, laying out, foundations, etc.; Vol. 4—Doors, windows, stair building, millwork, painting, etc. 4 vols. 1904 Pages. 3700 Illustrations. Whole set only $8.

CIRCLE No. 8 IN COUPON

## REFRIGERATION & AIR CONDITIONING

FOUR BOOKS IN ONE—basic principles, servicing, operation, repair of: 1. Household Refrigeration. 2. Special Refrigeration Units. 3. Commercial & Industrial Refrigeration. 4. Air Conditioning Systems. A GOLD MINE of essential information. Completely up-to-date. 1360 Pages. Fully Illustrated and Indexed. Priced at only $6.

CIRCLE No. 14 IN COUPON

## ELECTRICITY ILLUSTRATED

A COMPLETE COLLEGE EDUCATION!

ANSWERS QUESTIONS ON OVER 1000 ELECTRICAL PROBLEMS

DEDICATED TO ELECTRICAL PROGRESS

AUDELS **ELECTRIC LIBRARY**

**FOR ENGINEERS, ELECTRICIANS, ALL ELECTRICAL WORKERS, MECHANICS AND STUDENTS**

A COMPLETE ENCYCLOPEDIA explaining in the simplest terms the fundamental principles, rules and applications of applied electricity. A COMPLETE COLLEGE EDUCATION! Fully illustrated with diagrams and sketches, calculations and tables for ready reference. Questions and answers. Trial tests for practice study and review. All based on the most modern theory. Priced at only $20 for the ENTIRE SET.

Priced at only $20 for the ENTIRE SET. Also sold individually for $2 each.

**VOL. 1—BEGINNERS—STUDENTS—ELECTRICAL WORKERS**
A home study course clarifying the rules, laws and principles of electricity and magnetism; a real text book for students. Simple as A.B.C. No. 19

**VOL. 2—MOTOR MAINTENANCE—SERVICE MEN**
A real trouble shooter and indicator for those who design, build or operate D. C. electric machinery. No. 14

**VOL. 3—METERMEN—STORAGE BATTERY MEN**
A Meterman's Helper; giving accurate information on Storage Battery Engineering, electrical testing instruments, and tests, storage battery construction and repairs. No. 17

**VOL. 4—ALTERNATING CURRENT PRINCIPLES**
Original and easily understood methods of knowing—Alternating current principles and formulas. This difficult part of electricity now made simple as A.B.C. No. 18

**VOL. 5—ALTERNATING MACHINERY ENGINEERS**
A. C. Motors, all types, including their theory and design, construction, operation and maintenance, presenting in a forceful and simple manner so that all may understand. No. 19

**VOL. 6—POWER STATION ENGINEERS**
The A. C. illustrated book is divided into logical progressive and instructive sections, clearly outlining and giving real "dope" together with many side lights of information. No. 20

**VOL. 7—WIRE MEN AND LINEMEN**
Wiring information according to the Underwriter's Code together with over 1,200 instructive illustrated helps and hints, that will save trouble, money and time. Can be carried in the tool kit—wiring tables and calculations for ready reference. No. 21

**VOL. 8—ELECTRIC RAILWAY—SIGNAL MEN**
Presenting authentic and accurate technical information, covering the entire subject. No. 22

**VOL. 9—RADIO—MOTION PICTURE—TELEPHONE MEN**
Presenting in easily understood form all the theoretical and practical information needed. No. 23

**VOL. 10—GENERAL SERVICE—MAINTENANCE—WELDERS**
This is the General Service man's expert assistant. Gives practical information on modern electrical appliances such as electric ranges, washing machines, clothes dryers, ironers and dishwashers, explaining the basic principles, with detailed instructions on operation of the various types. No. 24

## DRAWING & DESIGN

**A practical course in mechanical drawing for shop and drafting room.**

1. SIGNS. Useful Terms and Definitions, with Illustrations.
2. HOW TO USE. The Drawing Board, T-Square and Triangles, Lettering, Shade and Section Lining, etc.
3. GEOMETRICAL DRAWING. Many illustrations largely based on practical problems.
4. DEVELOPMENT of Surfaces and Isometric, Cabinet and Orthographic Projections.
5. WORKING DRAWINGS. Tracing, Blue Print Reading, Tints and Colors, Physics, etc.
6. MACHINE DESIGN. Transmission Methods, Machinery, Engines, Boilers, Electrical Machines, Belts and Pulleys.
7. DRAWING INSTRUMENTS. Gear wheels, Dies and Presses, Drilling, Electrical and Milling Machines, Lathes.
8. REFERENCE INDEX. Tables of the utmost value.
9. How to use the Slide Rule.

480 Pages. 600 Illust. Full Page Drawings. Only $3.

CIRCLE No. 22 IN COUPON

## PAINTING & DECORATING MANUAL

Inside Trade information on outside and inside work, how to mix paints, preparation of surfaces, paper hanging, wood finishes, tools, synthetic paints, color (with color chart), spray equipment, costs, estimating, etc. A COMPLETE guide to easier, better painting and decorating. 464 Pages. Fully Illustrated. Only $2.

CIRCLE No. 7 IN COUPON

## ELECTRONIC DEVICES

**TELLS YOU WHAT YOU WANT TO KNOW ABOUT THE ELECTRIC EYE**

Late developments on Photo-electric Cells and their application. Includes easily understood explanations of the workings of the Electric Eye, Amplifiers, Anodes, Candle-power, Color Temperature, Illumination, Frequencies, Photo Tubes, Grid Bias, Voltage Photo-electric Tubes, Photocell, Vacuum Tubes, the Oscillator, Electron Tubes, Electrons versus Atoms, The Ohms Law, Wiring Diagrams. Complete book. 304 Pages. Illustrated. Priced at only $3.

CIRCLE No. 33 IN COUPON

## DIESEL

ALL THERE IS TO KNOW ABOUT MODERN DIESEL ENGINES. Basic principles, starting valves, timing, fuel pumps, fuel injection compressor, air compressors, pistons, cylinders, lubrication, cooling systems, etc. Answers on operation, calculations. 640 Pages. Fully Illustrated. Priced $3.

CIRCLE No. 9 IN COUPON

**WELDERS GUIDE**—Covers Electric, Oxy-acetylene, Thermit, Unionmelt welding for sheet metal, spot and pipe welds, pressure vessels and aluminum, copper, brass, bronze and other metals. Airplane work, surface hardening, hard facing, cutting, brazing, etc. 608 Pages. Fully Illustrated. Only $3.

CIRCLE No. 10 IN COUPON

## 7-DAY FREE EXAMINATION

SEND NO MONEY—Pay the postman nothing! We are glad to send you any of the Audel Guides for absolutely FREE examination in your own home. We take all the risks and leave all the decisions up to YOU. There is no obligation! If you decide to keep the books of your choice you may pay for them under our astounding easy-pay plan of only $2 a month.

**HERE IS ALL YOU DO**

IT'S EASY TO ORDER: In the *No-Risk* Mail Order Coupon at the right just draw a circle around the number of Audel Guides you want us to send you for FREE EXAMINATION. We will send them to you at once to help you build a brighter future by increasing your SKILL. If for any reason at all you are not COMPLETELY satisfied, return the books to us, and that will end the matter! NO STRINGS OR CATCHES TO THIS OFFER.

## MAIL THIS NO-RISK COUPON TODAY!

THEO. AUDEL & CO.—Self Improvement Publishers Since 1870—
49 W. 23rd Street, New York 10, N. Y.

| MI | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | |
| 12 | 13 | 14 | 15 | 16 | |
| 17 | 18 | 19 | 20 | 21 | |
| 22 | 23 | 24 | 25 | 26 | |
| 27 | 28 | 29 | 30 | 31 | |
| 32 | 33 | 34 | 35 | 36 | |
| 37 | 38 | 39 | 40 | 41 | |

Please mail me for 7 days' FREE EXAMINATION the books I have circled at right. I agree to remit $2 in 7 days on each book or set ordered, and to further mail $2 a month on each book or set ordered until I have paid the purchase price, plus shipping costs. If I am not completely satisfied with my Audel Guides I may return them.

NAME_____

ADDRESS_____

OCCUPATION_____

EMPLOYED BY_____

☐ **SAVE SHIPPING COSTS!** Check here if you enclose complete payment with order. We pay postage charges. You have same return privilege.

# Even Men with No Experience are Making as High as $1,000.00 IN A MONTH!

**A message to all men who are looking for a way to make more money faster, with one of America's greatest inventions wanted by millions.**

## Here's Your Opportunity to get into the BIG MONEY CLASS FAST with sensational PRESTO FIRE EXTINGUISHER

**Over 3,000,000 Sold for Homes, Offices, Autos, Service Stations, Stores, Farms, Boats**

Not everybody makes $1,000 in a month to start out, but read this: Florida salesman reports $600 in 1 month. Ohio man earned $2,100 in 2 months! Men everywhere, even in off hours, are rolling up amazing profits. Here's why. PRESTO's amazing new chemical, developed as secret defense during war, is 1½ to 6 times as effective as ordinary chemicals on equal weight basis. So PRESTO can be light, so handy a child can use. How about you cashing in on this great invention?

**ONLY PRESTO HAS ALL THESE FEATURES**

- Ends fire as fast as 2 seconds.
- Needs no inspection or recharging.
- Outperforms bulky extinguishers costing much more.
- Guaranteed for 20 years.

### Why Large Profits Are Easy

Everyone is terrified by FIRE! Millions have been waiting for this pure, simple, inexpensive safeguard. Most people who see the dramatic 5-second demonstration want one or more. You make as much as $2.70 on every one. Get started in this rich new field now!

### Complete Sales Outfit FREE!

Mail coupon for big Illustrated Sales Kit with everything you need to make fine money first day—NOW. Every day you hesitate can cost you $10, $15, even $50 you could be making! Everything FREE—no obligation—so MAIL COUPON TODAY!

**BIG MONEY LIKE THIS EVEN IN SPARE TIME**

Reports $80 a Week

Averaging less than a day or two a week, I have made as much as $75 to $80 a week. Walter Gable, Md.

Averages $15.20 an Hour

For every hour I devoted to PRESTO, I earned an average of $15.20. W. F. Wydallis, Ohio

**MERLITE INDUSTRIES INC.** 114 E. 32nd St., Dept. P-10T New York, New York

MERLITE INDUSTRIES INC. (Presto Div.)
114 E. 32nd St., Dept. P-10T, New York 16, N. Y.

Rush me complete Sales Outfit with full details how I can make big money very first day with Presto Fire Extinguisher. All FREE, no obligation.

Name .....

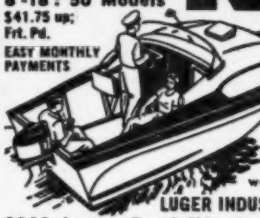
Address .....

City ..... Zone .... State .....

In Canada: Mupa Co., Ltd., 371 Dowd St., Montreal 1, P.Q.

# BOAT KITS

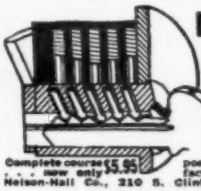
8'-18': 50 Models
$41.75 up; Frt. Pd.
EASY MONTHLY PAYMENTS



**FREE COLOR CATALOG**

Cruisers, convertibles, runabouts, fishing. Easily assembled by anyone. FREE Catalog has natural color photos, complete details, Fiberglas, accessories hardware, paint. Write Today.

LUGER INDUSTRIES, INC., Dept. D-1
9200 Access Road, Minneapolis 20, Minnesota



## Locksmithing AND KEY MAKING

**Now Made Easy!** Practical up-to-date course teaches you how to pick locks, decode, make master keys, repair, install, service, etc. New self-instructional lessons for every handyman, homeowner, carpenter, mechanic, service station operator, fix-it shop, hardware dealer, gunsmith. 53 easy illustrated lessons. Full price only $5.95 postpaid; or C.O.D. plus postage. Satisfaction or refund guaranteed.

Complete course $5.95 . . . now only $4.95
Nelson-Hall Co., 210 S. Clinton St., Dept. AR-3, Chicago 6, Ill.

# LAW FREE BOOK

THE LAW TRAINED MAN

Write today for a FREE copy of illustrated law book. "THE LAW-TRAINED MAN," which shows how to earn the professional Bachelor of Laws (LL.B.) degree through home study of the famous Blackstone Law Course. All necessary books and lessons provided. Moderate cost; convenient monthly terms. Write for FREE law training book today.

**Blackstone School of Law, 307 N. Michigan Ave.**
*Founded 1890* **Dept. 61, Chicago 1, Ill.**

## . . . Swiss or American

Unique Sweazey System starts you making repairs right away. Develops your skill step by step. Teaches simplified modern shop methods . . . professional short cuts. Learn by spare time home study from professional trade school. Low terms. Free sample lesson. No obligation.

CHICAGO SCHOOL OF WATCHMAKING
2330 Milwaukee, Dept. 619, Chicago 47, Ill.

## GOVERNMENT OIL LEASES LOW AS $1 PER ACRE

You do no drilling, pay no taxes, may realize a king-size profit without ever leaving home. Free map and booklet. Write to

**AMERICAN OIL SCOUTS, Dept. MI**
7321 Beverly Blvd. Los Angeles 36, Calif.

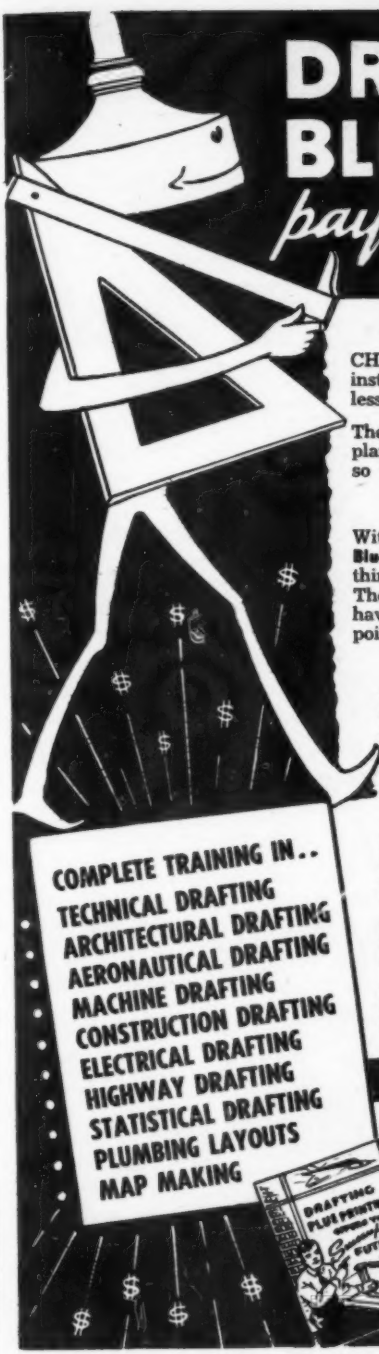
## $ GROW HERBS FOR US!

AT HOME— IN YOUR SPARE TIME

Help fill our huge demand — used in expensive medicines. Easy to grow indoors or out—multiply rapidly. Year around Profitunity. You grow—we buy—all! We supply everything you need. Fine rare seeds and revealing plan is yours free for the asking. Be one of the first to profit—rush name and address to: NATIONAL HERB EXCHANGE Dept. C-1, Gardena, Calif.

FREE SEEDS Write!

# DRAFTING *and* BLUE PRINTING *pay* BIG MONEY!




## LEARN AT HOME IN SPARE TIME!

CHRISTY sends you everything you need: professional drafting instruments, portable drafting table, drafting supplies, illustrated lesson manuals clearly written in simple language.

The need for Skilled Draftsmen to develop new plans, better plans, plans for a better tomorrow is great. That is why Draftsmen are so well paid. Machines can never replace the Draftsman.

## REVOLUTIONARY NEW METHOD!

With CHRISTY you learn **Professional Drafting techniques and Blue Print Reading** by working on actual problems. You design things. You learn the easy-to-remember way. One student, Gene Thomas, California, writes, "I want to enroll my friend. The lessons have all been so plain and the method used to bring out certain points have amazed me."

## LIGHT PLEASANT WORK!

Draftsmen work under ideal conditions, do stimulating, interesting work. People look up to the skilled professionally trained Draftsman. He designs the world of tomorrow. Clarence Anderson, California, a pictorial sign painter writes, "Using Drafting principles I get paid $35.00 per day."

## PAY AS YOU LEARN PLAN

CHRISTY TRAINING is designed to help you earn as you learn. William R. Thomas, Detroit writes, "I have accepted a position of Grade 5 Detailer. Just completed Lesson No. 31." Get started NOW.

FREE illustrated book tells you about the exciting, big wage paying positions available to skilled draftsmen. CHRISTY TRADES SCHOOL graduates are ready for immediate employment in their chosen fields. Send for your FREE book today. No obligation. CHRISTY TRADES SCHOOL, Dept. DB-206, 3214 W. Lawrence, Chicago 25.

## MAIL COUPON FOR FREE BOOK!

**CHRISTY TRADES SCHOOL, Dept. DB-206**
**3214 W. Lawrence Ave., Chicago 25**

Mail me at once your big FREE BOOK on Drafting and Blue Printing. Tell me how C.T.S. Home Training and Professional Drafting Instruments, Portable Drafting Table, Drafting Equipment, etc., can be had on a PAY AS YOU LEARN PLAN.

Name..... Age.....

Address .....

City..... Zone..... State.....

choose a career in

# MECHANICAL ENGINEERING

**Bachelor of Science Degree-4 yrs.**

**Associate in Applied Science Degree-2 yrs.**

Prepare for a rewarding career as an engineer or engineering technician at the Milwaukee School of Engineering—located in the machine shop of the world. At MSOE, you can earn an Associate in Applied Science degree in 2 years, or continue without loss of credit to your Bachelor's degree in 4 years.

All courses are approved by an Industrial Advisory Committee. Previous training and experience are evaluated for credit. Scholarships and part-time work available. Placement service for graduates.

**New Classes Begin in SEPTEMBER, JANUARY, MARCH, and JUNE**

*Choose from these courses:*

**MECHANICAL ENGINEERING**

BSME degree in 4 years
Plant Engineering, Metallurgical or Industrial Technology

**ENGINEERING TECHNICIAN**

AAS degree in 2 years
Air Conditioning, Metallurgical or Industrial Technology

Founded in 1903

*For more information, mail coupon today!*

**MILWAUKEE SCHOOL OF ENGINEERING**

Dept. MI-159, 1025 N. Milwaukee St., Milwaukee 1, Wisconsin

Send FREE career booklet (please print)

I am interested in _____ (name of course)

Name _____ Age _____

Address _____

City _____ Zone _____ State _____

☐ I am ☐ I am not eligible for veterans educational benefits _____ (discharge date)



*New Isotronic Training Method*

**LEARN TV REPAIR IN ONE SHORT WEEK!**

Now, after 5 year's research—a streamlined training system that *obsoletes all others!* In just 7 days you may earn $150 weekly, without paying up to $250 for training, studying long months! Developed by electronic scientists *in cooperation with major* TV mfr's., the new Isotronic method is the most *practical* ever devised! For conclusive proof, write for details and FREE SAMPLE LESSON. Use it on your own set or a friend's – repair it – convince yourself you can make *big money immediately* in your own TV business! Hurry – Free Lesson supply limited. Write:

T. V. Servicing Systems, Dept. C-151,
1038 So. La Brea, Los Angeles 19, Calif.



# AGES 60 to 80

## Apply for Life Insurance

For complete information by mail write to Old American Insurance Company, Dept. L152M, 1 West 9th, Kansas City, Mo., giving year of birth.

$10 COURSE FREE With Order

DAN LURIE
America's Outstanding Muscle Builder

**ADD UP TO 25 POUNDS of SOLID MUSCLES** IN TEN DAYS OR NOTHING

Only DAN LURIE BARBELLS and "Body Mold" courses produce such amazing results. 15 minutes a day can make you a bigger man. Send today for details. Order now at lowest factory price.

50 lb. set..$ 8.98 150 lb. set..$21.98
100 lb. set..$14.98 200 lb. set..$37.98

Semitool sets approx. 10% higher. Extra wts. 14c per lb. Send 50% cash, balance C.O.D. F.O.B. Plant.

DAN LURIE BARBELL CO.
52X1 Bristol St., Dept. 950A, Bklyn. 12, N.Y.



# STUDY TO BE A DOCTOR *of* PSYCHOLOGY *or* METAPHYSICS

Obtain a Ps.D., Ms.D., D.D., or Ph.D. Be a Teacher, Lecturer or Accredited Practitioner. Teach others how to achieve Health, Happiness and Contentment. Chartered by State. Correspondence Courses only. Write for FREE book telling how.

THE NEOTARIAN FELLOWSHIP
Desk 3, Pickwick Building Kansas City 6, Missouri



**MAKE BIG MONEY AT HOME!**

# INVISIBLE MENDING

**Pays up to $10 an Hour!**

Make moth holes, cigarette burns, tears, rips, *disappear* from all fabrics. Little-known craft pays extra spare-time profits at home. Write today for exciting details FREE!

**FABRICON, 6238 Broadway**
DEPT. 441 - CHICAGO 40, ILLINOIS

THE SKILLED HAND of the German gunsmith is responsible for this .22 caliber, 6-shot repeater automatic with self-ejecting clip. Just 4" long, it fits easily into pocket or purse. Perfectly suited for sporting events and for use on the stage. (Not available in California residents.) Comes to you for $6.95 postpaid from Best Values, Dept. G-239, 403 Market Street, Newark, New Jersey.

# DON'T BE HALF-TRAINED!

## Be A Master Technician

**NOW . . . ONE modern master home training course IN ALL 3 PHASES**

# AIR CONDITIONING - REFRIGERATION ELECTRICAL APPLIANCES

**ALL AT ONE LOW TUITION**

**only National Schools gives you this complete training at no extra cost**

**YOU GET AND KEEP ALL THESE TOOLS AND INSTRUMENTS**

Incomplete training limits your earning power, even disqualifies you for top-pay jobs. The big service companies require *complete*, all-phase training. **If you open your own shop,** you'll be called upon to service and repair *all types* of refrigerators, air conditioners and appliances. With *complete* training—as only National Technical Schools can give you—you can accept *every* job, make *big profits all year round.*

MEMBER

**NATIONAL TECHNICAL SCHOOLS**

WORLD-WIDE TRAINING SINCE 1905

4000 SO. FIGUEROA ST., LOS ANGELES 37, CALIF., U. S. A.

### FUTURE BRIGHT FOR TRAINED MASTER TECHNICIANS

Over 30,000 new technicians must be trained annually. You are needed to help service and repair the 50 million air conditioners, refrigerators and electrical appliances that will need fixing this year alone. No wonder the Master Technician has steady work, at high pay, year after year. He can go places in his own business or with a manufacturer, dealer, distributor or department store. Armed with all-phase training, his earning power is unlimited.

### THE MOST FOR LESS

We give you illustrated Shop-Tested Lessons and Manuals...many other training aids...privilege of CONSULTATION with our instructors and engineers. Every lesson, every manual has been SHOP tested and approved.

### JOB TRAINING AT HOME

You get Professional Tools, Precision Instruments, PLUS a Factory-Made APPLIANCE TESTER! A shop-full of *PRACTICAL,* professional equipment. Use them to conduct over 100 experiments ...also in Spare Time Work and ON THE JOB. It is all yours to keep... no EXTRA MONEY DEPOSITS...no EXTRA COST on your equipment kits.

### EARN AS YOU LEARN

We show you how. Many of our students pay for their entire course—and more—in Spare Time while learning. So can you. Graduate Advisory Service, too.

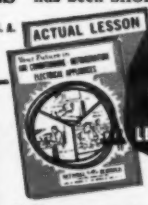
**GET THE BENEFIT OF OUR OVER 50 YEARS EXPERIENCE**

**N.T.S. also offers training in TV — RADIO — ELECTRONICS and AUTO MECHANICS — DIESEL**

### RESIDENT TRAINING AT LOS ANGELES

If you wish to take your training in our Resident School at Los Angeles, start NOW in our big modern Shops and Labs. Here you work with latest equipment...professionally installed... finest, most complete facilities offered by any school. Expert, friendly instructors. Personal attention. Graduate Advisory Service. Help in finding home near school...and part time job while you learn. Check box in coupon for full information.

ACTUAL LESSON



**SEND FOR FREE BOOK AND ACTUAL LESSON NOW!**

We'll rush you our big, illustrated OPPORTUNITY BOOK and ACTUAL LESSON, show you how easily you can learn. NO OBLIGATION; no salesman will call. Do it NOW! It costs nothing to find out.

**NATIONAL TECHNICAL SCHOOLS**

WORLD-WIDE TRAINING SINCE 1905

MAIL NOW TO
National Technical Schools, Dept. CA-19
4000 S. Figueroa St., Los Angeles 37, Calif.
Rush FREE "Opportunity" Book and Actual Lesson. No Salesman will call.

NAME _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

☐ Check here if interested ONLY in Resident Training at Los Angeles

# "MADE $1200 ON ONE JOB"

*Some make more, some less...*

**We help you start Your Own All-Year Business**

***Make BIG Money!*** With our easily operated, highly efficient wall washer, G. H. Jones made $1200 on one school job. E. L. Goss took in more than $10,000 in one year. E. C. Taber wrote, "*I made $400 gross in two weeks.*" And no wonder...this machine washes walls 6 times faster and better than by hand—with no mess...no drop cloths.

**Your Money-Making Opportunity** • We want more men to go into this profitable business for themselves and enjoy independence—freedom from layoffs and bosses. Customers everywhere—homes, offices, schools, churches, hotels, etc. How much you earn depends largely on you. What you take in is mostly profit. No need to rent, shop or office; operate from home. Start spare time until full time is justified.

***Lose No Time—Send Coupon Today for All the Facts***

**FREE BOOK! MAIL COUPON TODAY!**

**VON SCHRADER MFG. CO.**
**112 "W" Pl., Racine, Wisconsin**

Send at once (no obligation) your **FREE** booklet containing information about your WALL WASHING MACHINE and how I can start my own permanent, profitable business.

Name_____

Address_____

City_____ Zone____ State_____

*Become A - - -*

# BUILDING CONTRACTOR!

***MAIL COUPON for FREE BROCHURE***

Simplified home study training program. Learn every phase of building, estimating, contracting. Fortunes are made in this line of work every year. Use spare hours—no interference with present work. Diploma awarded. Low tuition rates.

**AMERICAN TECHNICAL SOCIETY**
**Dept. AK-19. 850 E. 58th Street, Chicago 37, Ill.**

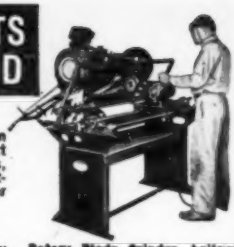
Please send me your FREE Brochure and full details of your building, estimating and contracting training program.

Name_____ Age____

Address_____

City_____ State_____

# 95% PROFITS YEAR 'ROUND



Be your own boss. Operate a SIMPLEX lawnmower sharpening service in your community. One compact machine grinds all mowers, sharpens cutlery. Low investment, 95% profit. Pays for itself in average month.

**SIMPLEX**
**—4 Machines in One!**

**Reel Grinder**—sharpens any mower reel in or out of mower.
**Bed Knife Grinder**—grinds with either round or cup wheel.
**Rotary Blade Grinder**—hollow grinds any rotary mower blade.
**Cutlery Knife Grinder**—sharpens cutlery, tools, scissors.

*Send for free, money-making details!*

**The FATE-ROOT-HEATH Company • Dept. MI-1 • Plymouth, Ohio**

# MEN WANTED

Earn $100 Per Week and up
AUTO. DIESEL MECHANICS

Master a trade with a future—learn Auto-Diesel mechanics in our shops. You learn with tools on real equipment. Earn while you learn. Many of our graduates earn $100 per week and up. No previous experience necessary. Day and night courses. Approved for veterans. Write for free bulletin.

**NASHVILLE AUTO-DIESEL COLLEGE**
**238 7th Ave., N., Dept. 50 Nashville 3, Tenn.**

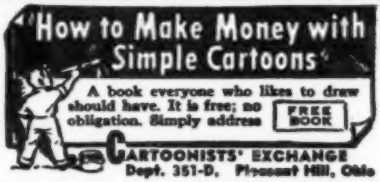
# REAL ESTATE
## BE A BROKER

**PAYS BIG! SEND FOR FREE, BIG, ILLUSTRATED CATALOG NOW!** Graduates report making substantial incomes. Start and run your own business quickly. Men, women of all ages, learn easily. Course covers Sales, Property Management, Appraising, Loans, Mortgages, and related subjects. **STUDY AT HOME** or in classrooms in leading cities. Diploma awarded. Write TODAY for free book! No obligation.

FREE BOOK TELLS HOW

Approved for World War II and Korean Veterans

**WEAVER SCHOOL OF REAL ESTATE** (Est. 1936)
**2020M Grand Avenue Kansas City, Mo.**



# "How to Make Money with Simple Cartoons"

A book everyone who likes to draw should have. It is free; no obligation. Simply address

FREE BOOK

**CARTOONISTS' EXCHANGE**
**Dept. 351-D, Pleasant Hill, Ohio**

# Catalog OF 2900 Novelties 10c

Send 10c for amazing catalog of novelties, live animals, scientific supplies, hobbies, funmakers, planes & boats, looms, magic tricks, joke articles, unusual seeds, gadget timesavers, cameras, optical goods, projectors, movies, lucky jewelry, religious novelties, disguises, musical instruments, stamps, coins, puzzles, fortune tellers, radios, auto & bike accessories, telescopes, magnifiers, compasses, banks, snoopers' gadgets, artists' supplies, printing sets, engines, motors, shockers, knives, billfolds, guns, rifles, sports, books, games, plants, etc. Send 10c (3 for 25c—get for friends).

**JOHNSON SMITH & CO. Dept. 457 Detroit 7, Michigan**

**$1.98**

**EXACT REPLICA**
**U. S. MARINE**
# GRENADE
**As Used in Hand Combat**

Get a real bang when you toss this replica of a Marine grenade. Startle ex-G.I.'s. Explodes automatically 4-seconds after pulling pin as it strikes ground. Can't break. Heavy gauge steel firing mechanism. Uses standard caps. Can be exploded over and over. Real collector's item. Comes complete with instructions. **Send $1.98 plus 25¢ shipping charge—cash, check or money order to: Standard American Suppliers, Inc. Grenade Dept. MI-12, One Park Ave., New York 16, N. Y.**

# INVENTORS

Learn how to protect your invention. The U. S. Patent Laws provide that any new and useful art, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof, may be patented if the act of invention is involved. Therefore, every inventor with a valuable invention should take advantage of the Patent Laws and proceed for patent protection in order to safeguard his rights.

A patent gives the inventor the exclusive right to prevent others from making, using, or selling the invention claimed in the patent for a period of seventeen years.

The Patent Laws were enacted for the benefit of the inventor to give him protection for the features of his invention which are patentable. These features must be properly and concisely set forth and claimed in a formal application for patent, in order to comply with the requirements of the Patent Laws. For that reason, unless the inventor is familiar with patent matters, he should engage a competent registered patent attorney or agent to represent him. We are registered to practice before the U. S. Patent Office and are prepared to serve you in the handling of your patent matters.

A specially prepared booklet entitled "Patent Guide for the Inventor", containing detailed information with respect to patent protection and procedure, together with a "Record of Invention" form will be promptly forwarded to you without obligation upon request.

**CLARENCE A. O'BRIEN & HARVEY JACOBSON**

*Registered Patent Attorneys*

**93-A DISTRICT NATIONAL BUILDING**

**WASHINGTON 5, D. C.**

# Invention Clinic

*Joseph H. Kraus*

**In this column each month Mr. Kraus will answer as many letters as space permits on those subjects he feels to be of widest general interest. Time does not allow him to reply to any letters except those printed here. Address your questions to the Invention Clinic, *Mechanix Illustrated*, 67 West 44 St., New York 36, N. Y.**

## *Sectional Metal Stairs*

*E. J. Armstrong of Winnipeg, Manitoba, sends diagrams and details of a pending patent on sectional stairs, which may be erected or dismantled and steps added or removed, using tools found in any home workshop. Should he go all the way or give it up? Would certain described changes make the present patent useless?*

This appears to be an excellent design. Properly constructed, and promoted at a price competitive with other metal stairs this should make a worthwhile product. Not having studied your claims I cannot state that your proposed changes will make your patent useless. However, I suspect that these are well within the claims you may win. You might provide risers, rails and rail mountings, as optional. Had these stairs been available a couple of months ago, I would have purchased a set.

## *Worm Scissors*

*Roy Shifrin of the Bronx, N. Y., has a patent pending on a worm scissors which not only cut the worm but hold it while the hook is being manipulated into the bait. An added feature is a hook dislodger. How can he interest a manufacturer?*

This would be a boon to some fishermen, and especially to the fair sex. But many a husky worm changes to a shoestring, only to reshape itself several times over while being handled. Then, too, there are several kinds of worms with body walls of different thicknesses. Have you made allowances for them? You should have several models made, mark hook sizes on the taper, and prepare to demonstrate. Many a scissors or sporting goods manufacturer should bid on this. If this tool works, you can enter my order for one in non-rusting metal.

### INVENTOR'S TIP OF THE MONTH

**Here is a gadget that would enhance TV viewing and make a million: something to turn down the volume of commercials automatically. An automatic device to eliminate all commercials completely would be worth even more, but might kill the goose that lays the golden eggs if attached to too many sets. Falling short of these ambitious ideas, but still loaded with possibilities, would be a wireless volume control that could be worked from any part of the room by the viewer.**

## *Chum And Pot For Fishing*

*Walter M. Kennedy of Westmont, N. J., sends a print of his patent-pending drawings for an expendable chum pot ready for use when purchased. Should he get in touch with a can manufacturer or a packer? What is our opinion? What is address of The American Can Company?*

If you can sell a pound of chum in a pot for not much more than the cost of chum in standard frozen packs, you stand a good chance for a market. No can manufacturer is interested in what you put into the cans. His business is to make and sell cans.

You have needlessly complicated the construction of the container. The top could be made the same as the bottom. The sides could be made of wire lath, hardware cloth, or cord netting, and perhaps save a couple of pennies, per pack. A plastic envelope might economically substitute for the cardboard wrapping.

[*Continued on page* 26]

# INVENTORS

If you believe that you have an invention, you should find out how to protect it. The first step is to have a search made of the prior pertinent U. S. patents. If a report on this search indicates that the invention appears patentable you can apply for a patent, and the specifications and claims should be prepared.

The firm of McMorrow, Berman & Davidson, with offices in Washington, D. C., is qualified to take the necessary steps for you. We can make a preliminary search on your invention, advise you whether we think it can be patented, and prepare your application for patent.

Unless you are fully familiar with the U. S. Patent Laws, we recommend that you engage the services of a Registered Patent Attorney to protect your interests. The patent laws are *your* laws. A patent gives you the right to prevent others from making, using or selling the invention claimed in your patent for a period of 17 years.

Use these patent laws for your protection. Investigate whether your invention can be patented. If you have what you believe to be an invention, we suggest that you have this firm make a search for you.

*Send for a copy of our Patent Booklet entitled "How To Protect Your Invention," containing information about patent protection and patent procedure. Along with this we will also send you an "Invention Record" form, for your use in writing down and sketching details of your invention. We will mail them promptly. No obligation. They are yours for the asking.*

## McMORROW, BERMAN & DAVIDSON

*Registered Patent Attorneys*

**PATENTS • COPYRIGHTS • PATENTS**

1391 VICTOR BUILDING, WASHINGTON 1, D. C.

# DRAFTSMEN

**CASH BIG PAY CHECKS!**

**Train Now for more success, greater security**

**LEARN AT HOME IN SPARE TIME**
**(or at college in Chicago)**

Check the want ads in any newspaper—SEE the big-pay opportunities open to you as a draftsman. What's more, you can learn this well-paid, prestige profession at home—quickly, easily! No special talent needed. Get complete, step-by-step Chicago Tech lessons in the mail, spend a few pleasant hours studying each week. In a short time you'll be a well-trained draftsman, ready to take your pick of many good jobs. Act now!

**FREE INFORMATION—MAIL COUPON TODAY!**

Get FREE TRIAL LESSON plus information about C.T.C. practical training. Learn what successful Chicago Tech graduates say about high pay and opportunities in drafting. No charge, or obligation.

**CHICAGO TECHNICAL COLLEGE**

A-283 Tech Bldg., 2000 So. Michigan Ave.
Chicago 16, Illinois

Mail me FREE lesson with facts about big opportunities in DRAFTING.

Name..... Age.....

Address .....

City..... Zone..... State.....



# INVENTORS

PROTECT YOUR INVENTION BY A U. S. PATENT. SEND FOR FREE "INVENTION RECORD" FORM AND "PATENT INFORMATION EVERY INVENTOR SHOULD HAVE"

**CARL MILLER**
**REGISTERED PATENT ATTORNEY**
WOOLWORTH BLDG., 36th FLOOR, 19B
NEW YORK CITY


## *Invention Clinic*

[*Continued from page 24*]

American Can has factories throughout the nation. You might contact the company at New York Central Building, N. Y.

### *Attachment Reducing Machine*

*Mrs. C. H., of Portland, Pa., has designed an attachment to convert a washing machine to a reducing machine. Her attorney states that her device is simpler than two others unearthed during a search. Does this have any merit?*

It depends on what you mean by merit. As the person using this device is not performing heavy physical exercise and merely remains in position while the machine does the shaking, vibrating or what have you, there will be no direct measurable reduction in weight. However, for some strange reason, reducing machines sell. Properly promoted, yours might sell too. •


# INVENTORS

U. S. Patents protect your inventions. Our free book of "Instructions on Patent Procedure for Inventors," also "Certificate of Invention" form sent without obligation.

**C. A. SNOW & CO.**
*REGISTERED PATENT ATTORNEYS*
427 SNOW BUILDING WASHINGTON 1, D. C.



# INVENTORS

Send for PATENT INFORMATION Book and INVENTOR'S RECORD without obligation

**GUSTAVE MILLER**
19-MI Warner Building
Washington 4, D. C.

REGISTERED PATENT ATTORNEY
ASSOCIATE EXAMINER
U. S. PAT. OFF. 1922-1929
Patent Attorney & Adviser
U. S. NAVY DEPT. 1938-1947
PATENT LAWYER



# TELLS HOW TO SELL YOUR INVENTION

If you have an invention that you believe has merit, write us at once for copy of copyrighted booklet "How to Go About Selling Your Invention." We work with manufacturers, and booklet reveals present marketa, qualities of a saleable invention, current royalty rates being paid by manufacturers. Booklet is FREE, is offered to encourage new ideas we might submit to manufacturers. Just send name (no drawings, please) to **Kessler Sales Corporation, Dept. B-61 Fremont, Ohio**



# High School Course at Home

**Many Finish in 2 Years**

If you did not or cannot finish high school, here is your opportunity. Study in spare time at home. Go as rapidly as your time and abilities permit. Course equivalent to residential school—prepares for college exams. Standard texts supplied. Credit for subjects already completed. Single subjects if desired. Diploma awarded. Be a High School graduate. Start studies now. Free Bulletin. Write today.

**AMERICAN SCHOOL, Dept. H128**
Drexel at 58th, Chicago 37, Illinois
Accredited Member NATIONAL HOME STUDY COUNCIL

Get into...

# PLASTIC LAMINATING AT HOME!

Sensational New "ONE MAN BUSINESS" ..pays $10 to $20 profit for each dollar of cost.

## Make $20 to $30 a day by our MAGIC MAIL PLAN... get orders and cash from your mailman!

Here's the newest and most fascinating of all home-operated businesses. For the first time, a simplified machine brings the fabulous profits of Plastic Sealing and Plastic Laminating within the reach of the small operator. Can be operated in a corner of the kitchen, basement, or garage. And any man or woman, regardless of age, education, or experience—can learn this interesting work *in a few minutes of reading*—can turn out professional jobs *after one hour's practice.*

## TWO EXCITING FIELDS FOR BIG PROFITS!

No house-to-house canvassing. No face-to-face selling. We not only supply the equipment you need for the work, but also show you exactly how to cash in big daily profits from two big demand fields.

### A FORTUNE IN PLASTIC SEALING

Millions of people want to protect valuable cards, photographs, documents and papers against wear, soil, and damage. By our MAGIC MAIL Plan you get this business through the mails. Open envelopes and take out money and orders. Details of this plan will amaze you. It will be sent free. Just mail coupon.

### ENORMOUS PROFITS IN LAMINATING

A creative, artistic business. Gift shops sell your entire output. Just a few of thousands of giftwares illustrated on this page. Beautiful colors. Endless designs. Exclusive "one of a kind" appeal brings sales at ten to twenty times the cost of materials. Beautiful illustrations and instructions for making these artistic novelties sent free.

The opportunities in Plastic Laminating are so big that space here does not permit even skimming the surface. To get any idea **FREE** at all of the size of these markets and your place in this sensational business you must read the details. See for yourself how easy it is to do the work—how you can put plastic sheets into your machine and take out a fortune—how money and orders come to you in the mail—how gift shops clamor to get more and more of your creations—how you can start with one machine and build up a big production plant with others doing the work—how you can get money and business from every State in the Union—how you can achieve independence without study or experience.

RUSH COUPON

Never before has such an opportunity been offered the small, home-operator—an opportunity to gain complete personal independence in a big money business of your own. Don't lose a minute. Get the facts at once. All information, fully illustrated with pictures, is free. Send the coupon—or send your name and address on a postcard. There is no charge now, or at any other time. Send for the information on this exciting opportunity today

### Cash Money Comes to You In the Mail

By our MAGIC MAIL Plan you sit at home, send out mail, and get back money and orders. Additional profits in supplying lifetime protection for SNAPSHOTS—IDENTIFICATION CARDS—DISCHARGE PAPERS—DRIVERS' LICENSES—SOCIAL SECURITY CARDS—VOTERS REG. CARDS—MENUS—BIRTH CERTIFICATES—CREDIT CARDS—BIRTH AND WEDDING ANNOUNCEMENTS—PASSES—DOCUMENTS.

Lifetime protection. See how laminating prevents soiling, wear, and moisture damage with flexible, plastic covers.

**NO MONEY— Just Send Name!**

WARNER ELECTRIC CO.
1512 Jarvis, Dept. L-4-A, Chicago 26, Illinois

### Thousands of Beautiful ART CREATIONS

Made by Laminating as explained in our Free information. Send coupon for list and pictures of COSTUME JEWELRY—JEWELS—CIGARETTE BOXES—CUFF LINKS—NOVELTY BUTTONS—TRAYS—CANDLESTICKS—COASTERS—CLOCK CASES—LAMP BASES—PICTURE FRAMES—BOOK ENDS—CHARMS—ADVERTISING SIGNS—NAME PLATES—BELT BUCKLES—CHECKERS—PAPER KNIVES—CHESSMEN—BOOKMARKS—TIE RACKS—KEEPSAKES OF ALL KINDS.

WARNER ELECTRIC CO., Dept. L-4-A,
1512 Jarvis Avenue, Chicago 26, Illinois

Please mail, postage prepaid, complete information with illustrations showing the things I can make and the money possibilities in Plastic Laminating. All this is free. No Salesman is to call. Also, tell me how I get orders and money from my Postman by the MAGIC MAIL Plan.

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Address mail to: MECHANIX ILLUSTRATED, Letters Editor, 67 West 44th Street, New York 36, N. Y.

## • *UFO's Again*

Throughout the past 11 years many myths about "flying saucers" have accumulated in the public's mind. Why? Beginning in 1947 the government and the newswire services ridiculed "saucers," then pursued them actively and ended by purposely clouding the issue.

The only conclusion I can reach is that UFO reports are being suppressed by high government officials. Nothing else can explain the irritating fact that, although people are constantly sighting these saucers, the press remains strangely silent and the Air Force continues to try and convince the American people that they are really having hallucinations.

By the way, I wonder how many people have noticed the incongruity of an Air Force order to "shoot to kill" an hallucination?

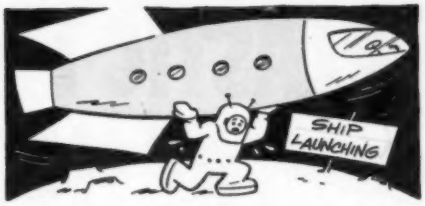
John L. Zeller
Cuyahoga Falls, Ohio

*You're absolutely right, John. As a matter of fact, Venusians took over this office two years ago.*

If the USAF says there are no saucers, OK —but I wish they'd stop scaring my cows as their milk production is down.

M.M.G.
Brattleboro, Vt.

## • *Milestone*




My brother and I figured out today how much weight a man could carry on the moon. We assumed the man's weight to be 200 pounds on earth and that he can carry 100 pounds. He is now supporting a total of 300 pounds. If gravity on the moon is one-fifth of earth's gravity, he can support a total load equivalent to 1,500 pounds on earth.

The man himself weighs only 40 pounds on the moon, so he is capable of handling a payload of 1,460 pounds.

What are your comments?

F. Kuyt
Thetford Mines, Que.

*Arithmetic seems OK. What really impresses us is your originality. Most people only talk about how high a guy can jump on the moon, how easy it will be to live there. You're the first men to figure how to get pooped on the moon.*

## • *Delicate Qu-st-n*

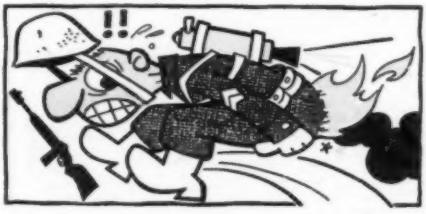
Only two questions came to mind as I read about the "Grasshopper Infantry" (Sept. MI).

First, how does a GI stop himself after a 100-yard leap at 35 mph without breaking a leg?

And last, is the Army going to issue larger canteens to the men to put out their own rear ---s?

Jim Norris
St. Petersburg, Fla.

*Two questions, two answers: First, Commando Training, sir. Second, asbestos pads in the seats of their p--ts.*




[Continued on page 30]

# INVENTORS--PATENTS

**If you consider your invention to be something of importance—if you have invented any new and useful art, machine, manufacture or composition of matter or improvement thereof—you are advised to protect your invention by applying for a U. S. patent.**

**A patent is a valuable right. It grants you a monopoly—the right to exclude others from making, using or selling your invention as claimed for a term of seventeen years.**

**The specification and claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy. Therefore, unless you are thoroughly familiar with such matters, you are advised to employ a competent registered patent attorney or agent.**

**This firm is registered to practice before the U. S. Patent Office and is available to assist you in the preparation and prosecution of your patent application.**

The "Evidence of Invention" form mentioned below is offered as a convenience to you in making your disclosure to us for search purposes.

You should date and sign your disclosure and have it witnessed by two or more persons who are capable of understanding your invention.

Your disclosure should be mailed to us together with a letter authorizing us to conduct a preliminary search among previously granted U. S. patents for similar types of invention.

We then make this search and prepare a report of the probable patentability of your invention. If such report is favorable, we recommend the further course for you to take.

The "Evidence of Invention" form and booklet are suggested as conveniences to you and us in starting action on your invention.

**VICTOR J. EVANS & CO.** · *Merlin M. Evans*

REGISTERED PATENT ATTORNEY

550-A MERLIN BUILDING, WASHINGTON 6, D. C.

**We shall be glad to send you promptly and without obligation, an instructive booklet, "Patent Protection for Inventors", which was prepared to give inventors detailed information and steps to take toward patent protection—also our convenient "Evidence of Invention" form. Use address Victor J. Evans & Co., 550-A Merlin Building, Washington 6, D. C.**

PATENTS COPYRIGHTS

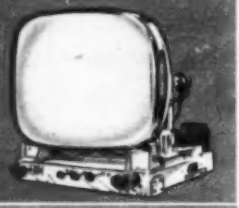
RCA INSTITUTES

course I

Electronic Fundamentals

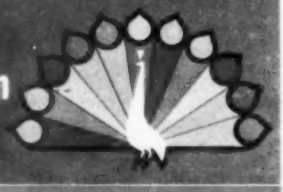
course II

Television Servicing



course III

Color Television



RCA Institutes offers you the finest of Home Study training. The equipment illustrated and text material you get with each course is yours to keep. Practical work with very first lesson. Courses for the beginner and the advanced student. Pay-as-you-learn. You need pay for only one study group at a time.

Send for FREE RCA Institutes Catalog

See coupon on opposite page

RESIDENT SCHOOL offers Technical Institute and Vocational School Courses in Electronics. Day and Evening classes. Resident School Catalog sent free on request.

## Dear Editor

[*Continued from page* 28]

### • *Happy Wagon Camper*

J. Robert Connor's article in the August MI on Station Wagon Camping was the grease on the skid that sent us into the "camping fever" in no "now and then" way. We will never take a vacation in any other way. The people you meet, the places you can go and the slight cost have entirely won us over.

As every tyro must find on the initial trip, there are bugs to be eliminated. Ours was a defective stove that took an hour and a half to get water warm enough to wash up the dishes and our faces. From then on it was either good neighbors lending their stoves, open fires or starting meals two or three hours ahead of time. When we returned the dealer took it back and promised to order us a Coleman white gas stove—the tyros learned.

Richard H. Cabell
Clarkston, Ga.

### • *January MI Mystery*

When Tom and Betty applied for their marriage license the first thing they were asked was their ages. With a natural reluctance to reveal so important a secret Betty said that they were both in their twenties and wasn't that close enough? The clerk insisted on more specific information, however, so Tom added that they both had the same birthday and that he was four times as old as Betty was when he was three times as old as Betty was when he was twice as old as Betty was. At this the clerk fainted and the young people snatched up the license, hurried to the preacher's and lived happily ever after. When the clerk came to and realized that he would have to complete his records some way or other he began to do a little figuring and before long had found out how old the two were. Can you tell too? (From 101 Puzzles in Thought and Logic by C. R. Wylie, Jr., $1.00, Dover Publications, New York.)

### • *November Mystery Solved*

With how few bearers can an explorer make a six-day march across an absolutely barren desert if he and the available bearers can each carry only enough food and water to last one man four days?

Answer: With two bearers.

T. R. S.
Montreal, Que. •

# RCA INSTITUTES proudly announces a new home study course...

# ELECTRONICS for AUTOMATION

Nucleonics, Photoelectronics, Digital Techniques, Synchros and Servomechanisms, Data Recorders, Automatic Process Controllers, Telemetering and Remote Control, Ultrasonics, and Automatic Control Systems . . . these are just a few of the many Industrial Electronics subjects covered in the new Electronics for Automation course.

RCA Institutes — now celebrating 50 years of electronic training — adds this new home study course to prepare you for a career as an electronic technician. Pay-as-you-learn. You need pay for only one study group at a time.

**RCA INSTITUTES, INC., Home Study School MI-19**

**A Service of Radio Corporation of America • 350 West Fourth Street, New York 14, N. Y.**

Without obligation, send me the FREE catalog of Home Study Courses. No salesman will call.

NAME.....
PLEASE PRINT

ADDRESS.....

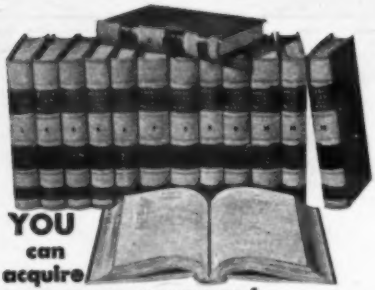
CITY.....ZONE.....STATE.....

Korean Vets! Enter discharge date.....

CANADIANS Take advantage of these same RCA Courses at no additional cost. No postage, no customs, no delay. Send coupon to:

RCA VICTOR COMPANY, LTD. • 5001 Cote de Liesse Rd., Montreal 9, Que.

TO SAVE TIME, PASTE COUPON ON POSTCARD



YOU can acquire

**LAW** AT HOME! EARN LL. B. DEGREE

LaSalle's famous Law Library—used as reference in many Law libraries and Law offices—has enabled thousands to master Law surprisingly fast, in spare hours at home, for business and professional advancement.

These 14 remarkable volumes, compiled by leading professors and lawyers, cover the whole basic field of Law in condensed, orderly, simplified manner.

You advance rapidly with this great library, plus special lectures furnished. We guide you step-by-step with personalized Problem Method of instruction...you *learn by doing*—handling legal problems—not by memorizing rules.

Send for two FREE booklets, "Law Training for Leadership," and "Evidence," answering questions about Law and its value to you. Mail coupon below. No obligation.

*Accredited member, National Home Study Council*

**LA SALLE EXTENSION UNIVERSITY**
***A Correspondence Institution***

417 S. Dearborn St. Dept. 1493L Chicago 5, Ill.

Send me your two FREE booklets described above, without obligation

*Name*.....*Age*.....

*Street*.....

*City, Zone & State*.....

# Refinishing's EASIER WITH

**Heavy-Bodied KLEAN-STRIP**

LOWEST PRICED WATER-WASHABLE PAINT REMOVER

Peels off paint and all other finishes quickly, easily. Non-inflammable and needs no neutralizing. Use for either wash-off or scrape-off removal. Write for free folder describing a professional's way to remove old finishes. **The Klean-Strip Co., Inc., P. O. Box 10083C, Memphis 6, Tenn.**

**HYDRAULIC JACK REPAIRS**

**Earn While You Learn at Home**

Millions of jacks in gas & auto-service stations, truckers, Lody-shops, riggers, factories, farms need servicing. We show you HOW—easy step by step directions—what tools to use. EARN UP TO $3 an hour, in spare time, in your own basement or garage. Start your own business NOW.

Write for folder No. MI-1 & free bonus offer

**Institute of Hydraulic Jack Repair**
P.O. Box 50, Bloomfield, N. J.

**ENGINEERING DEGREE IN 27 MONTHS**

B.S. degree (27 mo.): Aero., Chem., Civil, Elec., Mech. & Electronics. B.E. (36 mo.): Aero., Chem., Civil, Elec., Mech., Metal. B.S. (36 mo.): Math., Chem., Physics. Prep courses. Demand for grads. Campus. 20 bldgs; dorms, gym. Low rate. Earn board. G.I. appr. Enter March, June, Sept., Dec. Catalog. 1619 E. Washington Blvd., Fort Wayne 2, Ind.

Keeping pace with progress

**INDIANA TECHNICAL COLLEGE**

***Secrets of* VENTRILOQUISM *Now Revealed!***

Easy to learn to 60 to 90 days with our House Study Course. RESULTS GUARANTEED. Make Money! Be Popular! Have Fun! Big Opportunity! Radio, Television, Stage Appearances! For Free Information regarding price and terms, WRITE. You must state your age. Dummy Catalog 25c.

MAHER HOME COURSE OF VENTRILOQUISM
Box 36, Studio MI-1, Kensington Station
Detroit 24, Michigan

# LEARN MEAT CUTTING AT NATIONAL

**Pay After Graduation**

The steady dependable trade of Meat Cutting taught easily in 8 short weeks. YOU LEARN BY DOING under actual meat market conditions in big modern school at Toledo.

For beginners or men with experience. Get a profitable store of your own. Remember, PEOPLE MUST EAT! Big pay jobs. Free employment help. Thousands of successful graduates.

Buying, cutting, percentage, pricing, advertising, selling, etc. A complete retail meat education. National School established 36 years. Get National training NOW. Pay your tuition in easy weekly payments after you graduate. Send coupon for FREE school catalog—TODAY. G.I. approved.

**National School of Meat Cutting, Inc., Dept. 52-M, Toledo 4, Ohio**

Send me your FREE school catalog on National Training at Toledo in Meat Cutting, Meat Merchandising and Self Service Meats. No obligation. No salesman will call.

Name..... Age.....

Address .....

City..... State.....

Approved for Veterans

# Save Time, Work, Money

# FIX CARS FAST!

TUNE UP · DASH GAUGES · IGNITION · TROUBLE SHOOTING · OVERDRIVES · REAR AXLES · DIFFERENTIALS · GENERATORS · CARBURETORS · AUTOMATIC TRANSMISSIONS · STARTER SWITCHES · STARTING MOTORS · STEERING GEAR · DISTRIBUTORS · FUEL PUMPS · BRAKES · MUCH, MUCH MORE!

OVER 2½ MILLION COPIES SOLD!

•

USED BY U.S. ARMED FORCES

BRAND-NEW EDITION!

## Yes, Fix ANY Part of ANY Car—Quickly, Easily, RIGHT!

NOW you can "breeze thru" the toughest car repair jobs – in DOUBLE-QUICK time. If you're a beginner mechanic you can tackle jobs you never dreamed you could handle. And if you're already an expert, you'll save yourself hours of back-breaking work . . . and save money, to boot!

It's easy with the big brand-new Edition of famous MOTOR'S Manual. You get the expert help of 176 Official Factory Shop Manuals – the time and work-saving methods developed by factory engineers in every auto plant in America for their own motor car lines – boiled down in one handy indexed book.

"This wonderful book has paid for itself time and time again." —P. Pemper, Wisc.

### Factory Experts Practically Guide Your Hands

NO guesswork! NO false starts! MOTOR'S Manual starts you from "scratch" – expert "know-how" guides your hands through *every* step of practically *every job*. With clear illustrations and 1-2-3 instructions, these experts show you how to "polish off" any repair on any car listed – 1949 thru 1958!

"Have been a mechanic for 25 years. MOTOR'S Manual still takes me out of the tight spots." —V. Lauria, Nev.

NEW, REVISED Edition gives you everything you need to know to repair over 600 models. Over 1,000 giant-size pages. 2900 "this-is-how" pictures and diagrams. 291 "Quick-Check" Charts. 225,000 Service and Repair FACTS. Instructions and pictures so clear you CAN'T go wrong!

Here's everything you need to know to do FAST repairs on Automatic Transmissions, Air Suspensions, Ignitions, Carburetors, Steering Gears, Generators, Distributors, Power Steering and Brakes, Starter Motors, Starter Switches, and much, much more. No wonder more than 2½ MILLION copies have been sold. No wonder it's used by the U. S. Armed Forces.

**Try Book for 7 Days FREE SEND NO MONEY**

### Try It FREE 7 Days

SEND NO MONEY! Just mail coupon. (Paste it to a postcard for fast action.) Use the Manual for a whole week, *free*. If you don't agree that it is the greatest time-saver and work-saver you've ever seen – return book in 7 days, pay nothing. Mail coupon today! **MOTOR Book Dept., Desk 931, 250 West 55th St., New York 19, N. Y.** *(Schools, Bookstores: Write for discounts.)*

**Same FREE 7-Day Trial on TRUCK REPAIR MANUAL**

Covers every job on every popular make truck made since 1949 including GM and Cummins Diesels. Engines, fuel systems, ignition systems, starters, generators, transmissions, axles, brakes, steering, etc., etc. For FREE TRIAL, check box in coupon.

**COVERS ALL THESE MAKES 1949 Thru 1958**

| | | |
|---|---|---|
| Buick | Edsel | Oldsmobile |
| Cadillac | Ford | Packard |
| Chevrolet | Hudson | Plymouth |
| Chrysler | Imperial | Pontiac |
| Clipper | Jeep | Rambler |
| Continental | Lincoln | Studebaker |
| De Soto | Mercury | Thunderbird |
| Dodge | Nash | Willys |

**MAIL COUPON NOW FOR 7-DAY FREE TRIAL**
*(Attach to postcard if more convenient)*

**MOTOR BOOK DEPT.**
**Desk 931, 250 W. 55th St., New York 19, N. Y.**

Rush to me at once (check box opposite book you want):

☐ **MOTOR'S New AUTO REPAIR MANUAL.** If O.K., I will remit $2 in 7 days, $2 monthly for 2 months and $1.95 (plus 35¢ delivery charges) one month after that. Otherwise I will return book postpaid in 7 days. *(Foreign price, remit $10 cash with order.)*

☐ **MOTOR'S New TRUCK REPAIR MANUAL.** If O.K., I will remit $3 in 7 days and $2 monthly for 3 months, plus 35¢ delivery charges with final payment. Otherwise I will return book postpaid in 7 days. *(Foreign price, remit $11 cash with order.)*

Print Name.....Age.....

Address.....

City.....Zone....State.....

☐ Check box and save 39¢ shipping charge by enclosing WITH coupon in envelope entire payment of $7.95 for Auto Repair Manual (or $9 for Truck Repair Manual). Same 7-day return refund privilege applies.

# BUY DIRECT and SAVE UP TO 1/2 on ITALIAN ACCORDIONS EASY TERMS

**AMAZING NO RISK OFFER...** Now you can afford a world famous Accordion of finest tone and breathtaking beauty! Low wholesale prices save you half and more.

**5 DAYS FREE TRIAL**

**ACT NOW! FREE—**
- Music Stand
- Home Study Course
- Deluxe Case
- Lifetime Guarantee

**COLOR CATALOG FREE** Mail Coupon

## MONEY BACK GUARANTEE

Buy direct from world's largest dealer. Save 50% or more. 30 newest models to choose from. Extra bonus gifts if you buy now. Satisfaction guaranteed or money back. Trade-ins accepted. Low down payment; pay little as $10.00 a month. Try before you buy on FIVE DAY TRIAL. Rush coupon now for FREE color catalog and wholesale price list. Write TODAY.

**Accordion Manufacturers and Wholesalers Outlet, Dept. MX19**
**2003 W. Chicago Ave., Chicago 22, Ill.**

**Accordion Manufacturers & Wholesalers Outlet**
**2003 W. Chicago Ave., Dept. MX19, Chicago 22, Ill.**
Send FREE Color Catalog and price list.
NAME _____
ADDRESS _____
CITY _____ STATE _____



**WORLD'S LOWEST PRICED CALCULATOR!**
**NEW! NEW! NEW!**

## TOM THUMB ADDING MACHINE

But Only **$1.97** NOT $3.95
$2.03 in Penna. including 3% Tax.

With beautiful Leatherette carrying case. MADE IN AMERICA BY AMERICANS. Beware of cheap imported imitations. ADDS UP TO ONE BILLION—1,000,000,000—SUBTRACTS—MULTIPLIES—DIVIDES Mistake Proof—Positively 100% Accurate—Lightning Fast—Shock Proof Solid Steel Mechanism—GUARANTEED FOR YOUR LIFETIME. Ideal for Housewives, Shoppers, Students, Engineers and Tax work. Take it to the Super Market—Save $ $ $ every week. We pay postage if you send check, cash or money order—or just send your name & address and pay postman $1.97 plus postage. Immediate Delivery—10 Day Free Trial—Satisfaction Guaranteed or money refunded by return mail.

**SPECIAL GIFT OFFER**—3 Machines for only $4.95
**AGENTS WANTED**—Make easy money selling a Top Quality Calculator at our unbelievably low price.

TOM THUMB ADDING MACHINE
P.O. Box 5056, Dept. J-39, Philadelphia 11, Penna.

# TEN *delightful, exciting* MOVIES

FANTASTIC OFFER ALL TEN MOVIES IN 8mm FOR ONLY (16mm—$4) **$2**

The movie buy of a lifetime! Ten subjects, all different, brand new and thrilling, and all yours for only 20c each. You must be delighted or your money back! Rush $2 (cash, check or money order) to:

**SENSATIONAL MOVIE OFFER**
**Box 46856, Dept. M-3**
**West Hollywood 46, Calif.**

# Print Your Own

Cards, Stationery, Advertising, Circulars, labels, photo and movie titles, church work, tags, etc. Save money. Sold direct from factory only. Raised printing like engraving, too.

**Own a Printing Business**

Print for Others. Good Profit. Have home shop. Junior press $15; Senior $29 up. We supply everything. Easy rules. Pays for self in short time. Write for free catalog of outfits and all details.

**KELSEY PRESSES, B-9 Meriden, Conn.**



**NEW 16 FT. BIG MOTOR $229 RUNABOUT KIT** f.f.t. inc. — **FREE New Color Catalog**

**Fast—Safe—Roomy**
Many custom accessories. Full line of cruisers, runabouts, fishing boats.

**TAFT MARINE WOODCRAFT**
**Dept. Mi-159,** 636-39th Ave. N.E., Minneapolis, Minn.



## College Graduates Get Ahead Faster

. . . . have higher incomes. Grasp your chance for a better life. BACH. SC. DEGREE in 27 Months in Mech., Civil, Elect. (Electronics or Power Major), Chem., Aero. Engineering. in 36 Months in Bus. Adm. (Gen. Bus., Acctg., Motor Transport Mgt.). Superior students faster. Small classes. Enrollment limited. Beautiful campus. Well-equipped labs. More professional class hours. Placement service. Prep courses. Enter March, June, Sept., Jan. Earnest, capable students (whose budget requires acceleration and modest costs) are invited to write to Jean McCarthy, Dir. Adm., for catalog and "Your Career" book.

**TRI-STATE COLLEGE** 519 College Ave. Angola, Indiana



## GROW MINIATURE TREES

*FREE!* SEEDS & PLAN

New Fascinating HOBBY or HOME BUSINESS OPPORTUNITY! Learn little-known techniques for growing living "Ming" Trees only inches high. Beautiful Elm, Cherry, Orange, Cypress, Peach, etc., that BLOSSOM AND BEAR TINY TASTY FRUIT. Help Fill demand for these sensational dwarfed Trees. FREE SEEDS (8 kinds) and Plan. State your age. Write:

MINIATURE TREE NURSERIES, Dept. C-1, (Home-Growers Division) Gardena, Calif.



## YOU CAN MAKE MONEY

## BE A MANUFACTURER . . . MAKE THE HIGHEST PROFITS

I'll show you all the secrets of manufacturing special built cases and luggage in your home. Make cases for salesmen, manufacturers, scientists, photographers, musicians, hunters, fishermen as well as 1001 other items. Work sparetime or full time filling orders.

**NO CANVASSING, NO HOUSE TO HOUSE SELLING!**

Our advertising, our salesmen bring you business. No previous experience necessary — start in your kitchen, basement, garage, without expensive equipment, without a big capital investment. My plan is absolutely safe. You risk nothing because you can keep your present job and work sparetime until the profits get so big you can work full time. All materials supplied. Let me send you full particulars without the slightest cost or obligation so you can see for yourself.

**ABARSI CASECRAFT** Dept. C-1, 807 Sunset Boulevard Los Angeles, Calif.

OUR SALES ORGANIZATION GETS THE ORDERS — HELPS SELL YOUR PRODUCTS

# Make $500 an Hour CASH PROFIT THE DAY YOU START!

**START YOUR OWN BUSINESS AT HOME... SHARPEN HOUSEHOLD, GARDEN AND SHOP TOOLS IN SPARE TIME**

Now you can turn spare time into Big Cash Profits with new Belsaw Sharp-All. Sharpen knives, scissors, shears, snips, ice skates, mower blades, hedge trimmers, grass whips, axes, chisels, screw drivers, scrapers and saws... just about any household, garden and shop tool. Your own CASH business with no inventory. No calls to make. No experience needed.

Learn how easily you can start your own spare time business. Amazing low cost easy-payment plan. Send postcard for FREE BOOK.

FREE BOOK

**BELSAW SHARP-ALL CO.**
7189 Field Bldg. • Kansas City 11, Missouri

---

# "I DOUBLED MY INCOME— Am My Own Boss— in CUSTOM UPHOLSTERY"

**Leonard Schroeder, Former Low Paid Accountant—Increases Earnings 110%**

"I was an accountant earning a meager salary before UTS training in upholstery. Upon graduating, I got a much bigger paying job as an upholsterer. Now I've better than doubled my income in my own business."

**WHAT DO YOU WANT? Your own Profitable Business—A Steady Job—Substantial Sparetime Earnings—A More Secure Future? They're all Waiting for YOU in the Big-Opportunity Field of Custom Furniture Upholstery.**

There's a great demand for a trained upholsterer in good times and bad. Earn RIGHT OFF as you quickly, easily prepare for this well-paid trade.

Earn as you learn to make good money all year 'round at home, in your own shop, or in a well-paid job. With practical N. Y. State-approved UTS Course you learn professional custom furniture upholstery, reupholstery, slip-covers, furniture finishing, window cornice, cushion, and drapery making. Course includes—FREE—All tools, complete frames and materials. You make 3 beautiful upholstered pieces, yours to keep or sell.

**FREE ILLUSTRATED BOOK—FREE SAMPLE LESSON!**

MATERIALS FREE WITH COURSE YOU MAKE

PLUS SLIP COVERS
Yours to keep or sell

Our FREE book, "YOUR NEW WAY TO A SUCCESSFUL CAREER" with FREE Sample Lesson shows you how. WRITE TODAY! Training in N.Y. School also available. Upholstery Trades School, Dept. HA-1505, 721 B'way, N. Y. 3.

**MAIL COUPON TODAY. No Obligation.**

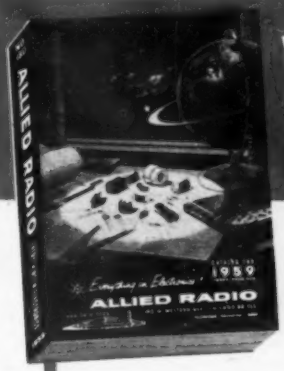
**APPROVED FOR VETERANS**

**UPHOLSTERY TRADES SCHOOL, Dept. HA-1505**
721 B'way, N. Y. 3
Please send me FREE book with FREE Sample Lesson. No obligation—no salesman will call.
☐ Home Study ☐ Training In N.Y. School

Name _____
(Please print plainly)
Address _____
City _____ Zone ____ State _____
☐ Check if Korean Veteran

---

# free! ALLIED'S MONEY SAVING 1959 ELECTRONIC SUPPLY CATALOG




**452** value-packed pages

send for it!

**SAVE ON EVERYTHING IN ELECTRONICS**

EASY TERMS AVAILABLE

## WORLD'S LARGEST STOCKS

Here is the complete guide to everything in Electronics for Experimenters, Builders, Amateurs, Servicemen, Engineers and Hi-Fi enthusiasts:

- Amazing Build-Your-Own KNIGHT-KITS
- Everything in STEREO Hi-Fi
- Hi-Fi Music Systems & Components
- Recorders & Phono Equipment
- Public Address & Paging Systems
- TV Tubes, Antennas, Accessories
- Amateur Station Equipment
- Latest Test & Lab Instruments
- Industrial Electronic Supplies
- Parts, Tubes, Transistors, Tools & Books

SAVE on everything in Electronics at ALLIED—get fast, dependable service, expert personal help, guaranteed satisfaction. Send today for your FREE 1959 ALLIED Catalog.

*Everything in Electronics From One Reliable Source*

OUR 38th YEAR

Send for FREE Catalog

**ALLIED RADIO**

ALLIED RADIO, CORP., Dept. 6-A9
100 N. Western Ave., Chicago 80, Ill.

☐ Rush FREE 1959 ALLIED 452-Page Catalog

Name _____
Address _____
City _____ Zone ____ State _____

## WAR SURPLUS BARGAINS SAVE UP TO 90%

**11 PIECE CROWFOOT WRENCH SETS** Wrenches snap onto T-bar in 3 different positions. The only wrenches for hard-to-get-to places. Mfd. by Plomb Tool Co. for U.S. Armed Forces. Finest case hardened tool steel. No shop mechanic should be without this set. Approx. GOVT. COST $47. NEW. $5.98 ppd.

**REVERSIBLE RATCHET WRENCH** Hi torque. Delivers tremendous leverage. 4' handle with reversible ratchet. 4 hexagon nut sockets, 2 3/8", 2 9/16" & 3 1/8". Mfd. by Lowell. Approx. GOVT. COST $215 per set. Wt. 50 lbs. NEW. Only $9.98 per set.

**MICROMETERS** Black crackle finish frame. Easy-to-read graduations in .001. NEW. 0-1" cap. $2.00 ppd. 1-2" cap. $3.79 ppd.

**"DELUXE 11" ARC WELDING KIT** Consists of 160-230 AMP Gen., voltage reg., ammeter, shunt, adjustable helmet, electrode holder, pr. welder's gloves, 30' welding cable, reactor coil, giant toggle switch, rheostat. Approx. GOVT. COST $650. All units guaranteed pre-tested. $34.95 complete.

**"SUPER 9" 200 AMP WELDING KIT** With Deluxe accessories consisting of one 200 AMP Gen., adjustable helmet, electrode holder, 30' welding cable, rheostat, giant toggle switch, voltmeter, voltage reg., 1 pr. heavy-duty welder's gloves. All units guaranteed pre-tested. Approx. GOVT. COST $500. Most items new—all perfect. $24.00.

**WELDING CABLE DOUBLE-O,** heavy duty, neoprene jacket, fiberglas insulation. NEW. Approx. GOVT. COST $40. Will handle 400 amps. or better. 50' lengths $14.50. 100' lengths $26.00.

**NEW!** Welding Reactor for above kits. 200 Amp. cap. or better. NEW. $7.95.

**FAMOUS NAVY MK14 AIR COMPRESSOR** Great for tree, termite, airbrush & paint spraying; filling tires, aquariums, etc. Dual & remote control electric receptacles, 115v 60 cycle AC, heavy duty HP. Westinghouse Motor. Direct drive. Water & explosion-proof. Built-in air filter, adjustable pressure setting up to 47 lbs. 3 cu. ft. per min. Self-contained switch. Mounting brackets. These units made under license of Sperry Gyroscope Co. Wt. 66 lbs. gross. Approx. GOVT. COST $585. Like NEW. $21.95.
With portable steel hand cart (shown), rubber wheels, specially constructed for mounting this unit. Incl. 25' rubber air hose. 6' extension cord with plug & fittings. Wt. 76 lbs. Complete with cart—$26.95.
With new internal pressure spray gun with 3 adjustable spray tips. 1 qt. cap. $33.95 complete.

**140-1 REDUCTION GEAR** For beaching boats, winches, hoists. Ideal for motor in golf or boy's electric car. DC motor & clutch. Easily reversible wiring diagram furnished. Hi torque, 1° speed. Runs on 6-12 or 24 V. Wt. .65 lbs. gross. Approx. GOVT. COST $300. Like NEW. $12.00. Matched splined gear for above—$3.00 ea.
*225-1 Reduction Gear—$13.50

**WOOD PROPELLER** Genuine rock maple radio drone "prop." perfect for den, trophy room, boy's room. Smooth, highly varnished, 30" tip to tip. Clock, barometer or photo can be inserted easily into center (mounting holes provided). Can use to operate ice sleds, etc. Approx. GOVT. COST $57. NEW. $4.95 ppd.

**BENDIX GEROTOR PUMP & MOTOR** Use wherever fluid pumping required. Excellent for hydraulic installations. Has ¾" pipe connections, built-in relief valve adjustable up to 1500 lbs. Max. cap. 6 GPM. 1½ H.P., 24 V. motor. Use on 12 to 36 V. Approx. GOVT. COST $350. NEW $10.95.

**NEW! 1959 CATALOG!** BIGGER & BETTER THAN EVER...971 price cuts. 1000's of bargains in war surplus & other items! 100's of pictures! Send 25c in coin for your copy today!
Ppd. prices USA only. Other prices FOB Culver City, Calif. Send cash, check or money order. 50% deposit on COD.

**AIRBORNE SALES CO.,** INC. DEPT. MI159
8501 Stellar Drive, Culver City, Calif.



# How to Write
## Short Stories, Mysteries, Articles

Adam Aretz

**For Part-Time Income or Career, Learn at Home. Free Lesson Shows How**

Would you be willing to spend a few hours a week learning to write about your ideas, experiences or hobbies to earn $500 to $1500 a year in addition to your regular income? Or many thousands on a full-time basis? Opportunities for new writers are greater than ever, and you don't need to be a genius to make good money.

Many Palmer beginners earn while learning, receiving welcome checks for material that may be turned out quickly when you acquire the technique.

*"Before completing the course I sold two stories: one for $110, another for $145. When the going got tough, I turned to the lessons and the answer was there."* Adam Aretz, Tarentum, Pa.

As a Palmer student, under the guidance of professional writer-instructors, you receive interesting, practical home-study instruction in *all* fields of writing: Fiction, Article, TV, radio. Actual writing assignments give you practice in writing salable material. Palmer is endorsed by Keith Monroe, Rupert Hughes, other famous authors.

**FREE Lesson Shows How**

To find out about your opportunities as a writer, send for free 40-page book, "The Art of Writing Salable Stories" plus free sample lesson and typical writing assignments. It may well be the beginning of a fascinating new life for you. No obligation. No salesman will call. Send now before you forget!

**Palmer Institute of Authorship** Since 1917
*Only School of Writing Accredited by National Home Study Council*
Desk Y-19, 1680 N. Sycamore, Hollywood 28, Calif.

**FREE**

Palmer Institute of Authorship, Since 1917
1680 N. Sycamore, Desk Y-19
Hollywood 28, Calif.

Please send me free lesson and 40-page book explaining how you help new writers get started and experienced writers increase their income.
Mr.
Miss .....
Mrs.
Address .....

City ..... Zone ..... State .....
Please print clearly. Veterans: Check here ☐



## Now Many Wear
# FALSE TEETH
## With More Comfort

FASTEETH, a pleasant **alkaline** (non-acid) powder, holds false teeth more firmly. To eat and talk in more comfort, just sprinkle a little FASTEETH on your plates. No gummy, gooey, pasty taste or feeling. Checks "plate odor" (denture breath). Get FASTEETH at drug counters everywhere.



**PELLET FIRING "45" CALIBRE AUTOMATIC**
- Magazine Loading Clip
- 15 Moving Parts
- Fires 8 Rounds
- Fully Automatic

$1.98

Automatic Full Size model of high powered "45" calibre, contains over 15 moving parts. Loads 8 complete rounds in magazine clip which snaps into hard butt like Army "45." Fires 8 bullet-like pellets. Automatic slide action.
TRY THE WORKING MECHANISM OF A "45"
Comes to you disassembled with all the working parts of a "45." Assembles in a jiffy and full instructions are included plus full supply of pellets and man-size silhouette target. Money back guarantee. Send $1.98 plus 25c shipping charge. Cash, check or money order to:
BARGAIN (GUN) COMPANY, Dept. MI-12, One Park Avenue, New York City



# MEN PAST 40
## Afflicted With Bladder Trouble, Pains in Back, Hips, Legs, Nervousness, Tiredness.

If you have these troubles, particularly bladder trouble, then your condition may be traced to Glandular Inflammation . . . a constitutional disease. Neglect of this condition often leads to premature old age and sometimes incurable malignancy.

The Excelsior Medical Clinic has a **New Free Book** that tells how thousands of men have been successfully treated here at Excelsior Springs for Glandular Inflammation by **NON-SURGICAL Methods.** They found soothing relief and a new outlook in the future of life.

This **Free Book** may prove of utmost importance in your life. Write Today. There is no obligation.

**Excelsior Medical Clinic, Dept. B5129, Excelsior Spgs., Mo.**

PROTECTS FURNITURE, CARS, APPLIANCES, ETC.

# 2 GIANT PLASTIC SHEETS $1

## 216 SQ. FT. IN ALL

*Twice as much as others give you.*

Others charge $1.00 for **ONE** big 9 x 12-ft. size transparent, one-piece, no seam Plastic Cloth, but our price is only **$1.00** for **TWO!** Tremendous number of uses—wonderful for covering cars, boats, bicycles, baby carriages, appliances, indoor or outdoor furniture, rugs, fans, air conditioners, tools, housewares, etc. Perfect for covering walls, floors, steps, furniture, when papering, painting, washing walls, etc. Make Aprons, Tablecloths, Auto Seat Covers, Furniture Slip Covers, etc. Cuts easily with scissors. Can be pieced or sealed together without sewing. Waterproof, greaseproof. Never needs washing or ironing—just wet and rinse. STRONG and tear-resistant. You MUST be thrilled, or money refunded! Send $1.00 plus 25c for pstg. & hdlg. or $1.25 in all for each **TWO** 9 x 12-ft. (216 sq. ft.) sheets. Order Now!

**L & M COMPANY**
**Dept. PL-121, Box 881, St. Louis, Mo.**

# ABSOLUTELY FREE!

**Amazing 48-page muscle-building course, with photos of Champs! HOW TO DEVELOP A**

## HE-MAN BODY!

**TRADE IN** that skinny, scrawny, milk toast body of yours for a jet-charged WEIDER physique — rippling with mountains of mighty muscle, oozing confidence and virility out of every pore! Now get my SENSATIONAL INTRODUCTORY MUSCLE-BUILDING COURSE — not for $100, not for $50 but **ABSOLUTELY FREE** if you act now!

**Mail** this coupon for your FREE COPY. See how easy it is to have a DYNAMIC HE-MAN BODY in just 15 minutes a day in your own home! Hurry, while offer lasts! Mail today!

**JOE WEIDER**, Dept. 40-19M
803 Palisade Ave., Union City, N. J.

Rush FREE Power-Packed Muscle Building Course. I enclose 10¢ for handling and postage. (offer limited to men over 16)

Name _____

Address _____

City _____ State _____ Age ____

# FOR YOU BETTER PAY and a BRIGHTER FUTURE IN AUTO MECHANICS AND DIESEL

**Your spare time pays off BIG with our world-famous *SHOP TESTED* Home Training**

### MAKE YOUR FUTURE AS BRIGHT AS THEIRS

In a matter of months, you can quit your no-future job for a big-pay, big-future career as an Auto-Diesel Mechanic. Free Illustrated Book gives you the facts. Send coupon below. No Obligation. No Salesman will call.

### All Phase Training

N. T. S. students become skilled, all-around mechanics. Crystal-clear lessons, Shop-Tested manuals, real professional equipment, make it easy to learn. Big equipment kits, yours to keep. Earn as you learn...we show you how. Graduate Advisory Service.

### N.T.S. Training is Better, More Complete, Lower Cost BETTER...

Because training is SHOP-TESTED in Resident School Shops & Labs. MORE COMPLETE...You learn all phases of Auto Mechanics & Diesel. LOWER COST...One low tuition covers entire cost of course and all equipment.

### Unlimited Opportunities

Trained mechanics make top money...are in demand at dealer shops, garages, large bus and truck lines, construction projects, government labs, factories, and many others.

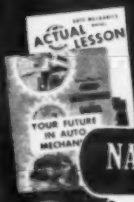
### YOU GET AND KEEP ALL THIS PROFESSIONAL EQUIPMENT

★ Complete set of master mechanic tools & tool box.

★ Motor analyzing set—4 test units in metal case.

★ Socket Wrench Set with fittings for all engines.

**NATIONAL TECHNICAL SCHOOLS**
4000 S. FIGUEROA ST., LOS ANGELES 37, CALIF. U.S.A.




**FREE!**
Illustrated Fact Book & Actual Lesson
Mail coupon now.

RESIDENT TRAINING at Los Angeles!
If you wish to take Resident Training at Los Angeles, in our Big, Modern Shops & Labs, check special box in coupon for full information.

Complete TV-Radio Electronics training also available.

Regis. Appl. for

**NATIONAL TECHNICAL SCHOOLS**
WORLD'S BIG TRAINING SINCE 1905

Member

MAIL NOW TO
**NATIONAL TECHNICAL SCHOOLS, Dept. DA-19**
**4000 S. FIGUEROA ST., LOS ANGELES 37, CALIF.**
Send for FREE Auto-Diesel Opportunity Book and actual Lesson.

NAME _____ AGE _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

☐ Check if interested ONLY in Resident School training at Los Angeles.

VETERANS: Give date of Discharge _____

# BE A COMMERCIAL *Artist*

*Learn Illustrating, Cartooning, Figure Drawing, Fashion Drawing, TV Art, etc. At Home, in Spare Time*

## All for 20¢ a Day!

PREPARE for a fascinating, profitable Art career this easy, proven way. We supply TWO ARTIST OUTFITS *at no extra cost.* Our low-cost "teach-yourself" course includes all branches of art listed here. Cash in on demand for trained artists in advertising agencies, newspapers, magazines, TV stations, etc. Make good money part time or full time; free lance or be your own boss.

**FREE BOOK** describes our easy method. Send for it. No obligation. No salesman will call. Clip ad, fill in name, address and mail to: **Washington School of Art, Studio 101, Port Washington, N.Y.** *(Est. 1914)*

**ONE LOW-COST COURSE INCLUDES:**
- Commercial Art
- Illustrating
- Cartooning
- Lettering
- Fashion Drawing
- Landscape
- Oil and Water-color Painting

Name ..... Age .....

Address .....

City ..... Zone ..... State .....

---

LEARN TO

# OPERATE

## EARTH MOVING EQUIPMENT

Wanted: Men to operate bulldozers, trucks, loaders & scrapers (4 wk.—200 hrs.) $375; motor graders & compactors (4 wk.—200 hrs.) $375; 7 wk. combination of above (350 hrs.) $650; cranes, dragline & backhoe operation (4 wk.—200 hrs.) $375; construction-type dump truck, trailer dump & off-highway truck course. (2 wks.—100 hrs.) $195. All courses include preventive maintenance—Special weekend classes Bulldozer Operation—40 hrs. training—2 weekends—$10 down. Train for Nat'l. Road Bldg. program—60 miles from Chicago—Economical housing & board—Write for details NOW.

**OR BE A CONSTRUCTION EQUIPMENT**

## MECHANIC

Greer trains you to earn top pay. Complete Mechanics Course covering Diesel engine transmissions; torque converters; fuel injection systems; track assemblies; final drive assemblies, steering systems; idlers; rollers; power transfer systems; cable control systems; hydraulic control cylinders & welding pertaining to heavy equipment such as bulldozers, scrapers, loaders, off-highway trucks, etc. Course time—540 hours—10 weeks. Convenient payment plan. Write for details.

Please send **FREE** information on
- ☐ HEAVY EQUIPMENT OPERATORS TRAINING
- ☐ CONSTRUCTION EQUIPMENT MECHANICS TRAINING

Name ..... Age .....

Address ..... Phone .....

City ..... State .....

**Greer TECHNICAL INSTITUTE**
ATT. I. A. Hutch. Box 278, Braidwood, Ill.

---

MAKE $50 A DAY

SELL **MASTER** Advertising Uniforms To Business Men

- FULL OR PART TIME
- SAMPLE FURNISHED

- Not House-To-House
- You Invest Nothing
- Full or Part Time

Sell 10, 20, 100 uniforms at a time. Big reorders. No experience needed. Free powerful sample outfit. Tested selling methods. A few calls can bring you $50 and more per day. We show you how. Write today. No obligation.

**GEORGE MASTER GARMENT CO.** Dept. J-28 Ligonier, Ind.

---

**DRAINS** cellars, cisterns, wash tubs. **IRRIGATES - CIRCULATES - SPRAYS**

1,001 uses. Stainless shaft. Won't rust or clog! Use ⅙ HP motor or larger. . . . ¾ HP for up to 3,000 GPH; 450 GPH 80' high; or 1,800 GPH from 25' well. 1" inlet; ¾" outlet. Coupling included free. **$7.95**

Heavy Duty Ball-Bearing Pump. Up to 7,500 GPH. 1¼" inlet; 1" outlet. **$12.95**

Postpaid if cash with order. Also other sizes, types.
MONEY BACK GUARANTEE
LABAWCO PUMPS, Belle Mead 30A, N. J.

**CELLAR DRAINER**

"Low Boy" KIT 15½" high 1500 GPH. **$12.95** (less motor)

"High Boy"—32" high. 3,000 GPH **$15.95** (less motor)

---

# SUPER JU JITSU

**Now get tough double quick!**

A course of instruction in the art of practicing and using this method of applying LIGHTNING-QUICK Super Ju Jitsu. Be Dangerous! These amazing lessons show you how it's done . . . in a big illustrated home-study course. The weapons are just your BARE HANDS—they can be used effectively if you know how and practice the art. Easy to learn; quick. Full 76-lesson course only $5.95 postpaid—or COD, plus postage. Satisfaction or your money back guaranteed! Order "Super Ju Jitsu Course."

NELSON-HALL CO., 210 S. Clinton, Dept. SAR-3, Chicago 6, Ill.

---

# FIX OUTBOARD MOTORS

## POWERMOWERS, AND ALL SMALL 2 & 4-CYCLE GASOLINE ENGINES

MAKE EXTRA MONEY—or, repair your own equipment and SAVE! Fully illustrated, easy-to-understand, Home Study Course. Write today for FREE information.

**LINCOLN TECHNICAL INSTITUTE**
SUITE 1-Q, 472 MARKET STREET, NEWARK 5, N. J.

---

## EARN GOOD MONEY IN SPARE OR FULL TIME.

UP TO $30 A DAY WITH A UNIVERSAL GRINDER

Have a business of your own in your garage or basement, sharpening lawn mowers. Be your own boss. Small investment. We furnish everything you need to start. Write Dept. L-19 today for complete details **FREE**

ROGERS MANUFACTURING CO.
LINDSEY, OHIO

---

# HOME-IMPORT BUSINESS . . . .

Men, women. Make big profits buying low cost imports abroad (see examples at left) and selling to friends, stores or by mail order. Famous world trader guides you—shows you how to find thousands of exotic imports for full or spare time business, how to **pocket profits in advance on foreign drop shipment plan.** Full details FREE! Airmail reaches us overnight. Write Today!

**MELLINGER CO., 1717 Westwood**
Dept. X201, LOS ANGELES 24, CALIFORNIA

People naturally look up to a Tall Man! You've done it yourself. Slip into "ELEVATORS" and you are that Tall Man—almost 2 inches taller instantly...confidentially. Only you know the secret*, but everyone notices the difference. Step into "ELEVATORS" today. Step up in the world! Gain the poise and confidence only a Tall Man has.

Over 30 styles

Chukka Boot

ELEVATORS

*Write for FREE "ELEVATORS" BOOKLET today!

STONE-TARLOW Sales Corp., Dept. 7-19, Brockton 68, Mass.

## *NEW* Vest Pocket .22 . . . . $12.95

Brand new 1959 Model 6-shot German revolver that sells in the $28-34 range. A tight, accurate well-made piece. 5½" Bbl., 5" overall. Fires popular Winch., Rem., Western, Peters .22 short ammo. Features side gate loading, screw-in ejector rod. Has steel rifled barrel with blade front sight. Excel. for target, plinking or defense. 10-day money back guar. Only $12.95 COD's require $6.50 deposit. Leather holster $2.25. Shipped FOB, Los Angeles express charges collect. Send cash, check or M.O. Calif. res. add 4% state tax.

**SEAPORT TRADERS, INC., Dept. M-1**
**409 E. 12th St., Los Angeles 15, Calif.**

Want BIG PAY—
Your Own Business?

Be a

# LOCKSMITH

You can quickly step into a well-paid job or start a big-profit business of your own. Shortage of locksmiths means opportunities everywhere, spare-time or full-time.

**EARN EXTRA MONEY FROM THE START!**

**All Special Tools, Supplies Furnished Free.** Age, education, minor physical handicaps don't matter in this growing, steady-income trade. You learn fast at home — gain practical experience through well-illustrated lessons. You do real jobs under the personal guidance of experts. Only school of its kind. Licensed State of N. J.; Accredited Nat'l. Home Study Council.

For a future as your own boss, or in a big pay job, send for FREE illustrated book. Mail coupon at once. No salesman will call. **Approved for Veterans**

**Locksmithing Institute, Dept. 301-S**
**150 Park Ave., E. Rutherford, N. J.**

Please send FREE and without obligation illustrated book.

Name.....

Address.....

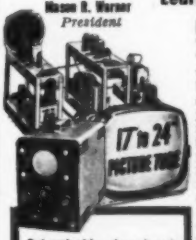
City..... Zone..... State.....

# Only $6.00 starts you in TELEVISION *and* RADIO

**Learn in spare time at home to fill the best paying jobs—my new, faster way!**

Mason B. Warner
*President*

**We're making it easier than ever to become a well paid Radio-TV Service Technician the proved 'Learn-by-Doing' Sprayberry way!**




Get valuable shop bench practical experience fast with expertly engineered kits you'll assemble.

**EARN WHILE YOU LEARN!**
Trained Radio-Television Service Technicians are needed at once by the thousands! If you are looking for better pay, a bright future and interesting work . . . there's a place for you in Radio and Television. Be ready to step into a good paying job in 10 months or less . . . or your own profitable business! Train at home in spare time. I'll help you earn extra money while you train . . . doing instructive radio service jobs. Our new tuition terms are more liberal than ever . . . only $6 starts you towards success in this booming field!

**25 KITS OF RADIO-TV PARTS**
In addition to modern lessons, you train with actual parts and equipment. Build the famous Sprayberry Training Television Set, Multi-Range Tester, 2-Band Radio, Test Equipment—all yours to keep. Get latest training on Color TV, Transistors, Hi-Fi and UHF Conversions!

**SEE HOW EASILY YOU CAN LEARN**
See for yourself . . . in actual pictures and descriptions . . . what Sprayberry Radio-Television Training offers you. Backed by almost 30 years of training experience. Three training plans to suit your exact needs. Rush coupon today for big new catalog and sample lesson. No obligation; no salesman will call.

SPRAYBERRY ACADEMY OF RADIO-TV
1512 Jarvis Ave., Dept. 15-Q Chicago 26, Ill.

**FREE** 60 Page Catalog and Sample Lesson

**Sprayberry Academy of Radio-Television**
**1512 Jarvis Ave., Dept. 15-Q Chicago 26, Ill.**

Please rush catalog on your ALL-NEW Radio-Television Training Plans. I understand this does not obligate me. No salesman will call. Include Sample Lesson FREE.

Name..... Age.....

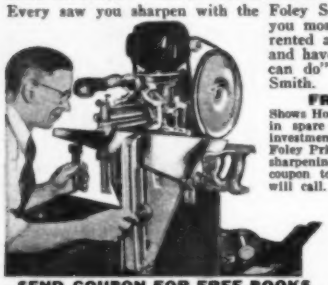
Address.....

City..... Zone..... State.....

# FREE PLAN
tells how to start your own business
# FILING SAWS

Here is a steady repeat CASH business you can start in your own basement or garage in your spare time and make up to $3 or $6 an hour. You can file hand, band and cross-cut saws on the Foley Saw Filer. No eyestrain—no experience needed. "The first saw I sharpened with my Foley Filer came out 100%."—writes Clarence E. Parsons.

Every saw you sharpen with the Foley Saw Filer brings you more customers. "I rented a two-car garage and have all the work I can do"—Charles H. Smith.



**FREE BOOK**
Shows How To Start at home in spare time, with small investment, no overhead. Foley Price Guide gives saw sharpening charges. Send coupon today. No salesman will call.

**SEND COUPON FOR FREE BOOKS**

**FOLEY MFG. CO., 115-9 Foley Bldg. Minneapolis 15, Minn.**
Send me free book "Money Making Facts" and Foley Price Guide of saw sharpening charges.

Name _____

Address _____



# LEARN PLASTICS FABRICATION AT HOME!

**Complete Low-Cost Home Training Course NOW Available**

There's exciting opportunities for *you* in Plastics Fabrication. Fun and relaxation as a hobby! Big money as a spare or full-time business! Course teaches you how to make molded, cast, internally carved colored plastic jewelry, toys, furniture, novelties, signs. Professionally prepared. Used by Manual Training and Industrial Arts Teachers. Earn as you learn. All materials furnished. For men, women.

Accredited Member National Home Study Council

**SEND FOR FREE BOOKLET**

**INTERSTATE TRAINING SERVICE**
Dept. C-4, Portland 12, Oregon
Send Free Booklet on Plastics Home Training Course

Name _____

Address _____

City _____ Zone _____ State _____


## RCA INSTITUTES CELEBRATES GOLDEN ANNIVERSARY

RCA Institutes, a service of Radio Corporation Of America, this year celebrates its 50th year of training in the electronics field. The school was originally started in 1909 as the Marconi Institute.

The Institutes are located at 350 West 4th St., New York, N. Y. Resident School Courses at the Technical Institute level offer students a college-level course in Advanced Electronics Technology. The Vocational School offers courses in Television and General Electronics, Radio and Television Servicing and Radio-Telegraph Operating.

The Home Study School offers correspondence courses covering the entire field of Radio, Television and Electronics. The courses include Electronic Fundamentals, for the beginner with no previous background in Radio; TV Servicing, for the advanced radio student; Color Television, for the television technician; and a new course Electronics For Automation which is the first of two courses in the field of Industrial Electronics.

## DON'T DO-ITS

ALSO NEW LAPSTRAKE KITS

# U-MAK-IT BOAT KITS

FIRST AND OLDEST KIT BOAT MANUFACTURER

Most complete line of PRAMS, ROWBOATS, OUTBOARDS, CABIN CRUISERS and new Lapstrake kits.

MAIL 35c (coin) for post. & hdlg. for ILLUSTRATED CATALOG

Showing all models 8' to 23' including accessories, paints, etc. All you need to build your own.

U-MAK-IT PRODUCTS

DELAND, FLA.— DEPT. 14

IS SOCIAL SECURITY ENOUGH FOR YOU?

EARN EXTRA CASH SHARPENING LAWN MOWERS

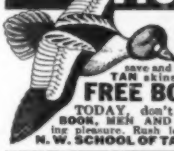
Look around . . . many mowers need sharpening. You can earn up to $5.00/hr. It's easy too with MODERN'S versatile precision-built LAWN MOWER SHARPENER AND BED KNIFE GRINDER . . . the finest sharpening equipment you can use. Set up your operation in your garage or basement. Make it a full or part time operation. You make money from the start. Send for all details, they're free.

$275.00 F.O.B. Pasadena

MODERN MFG. CO.

160 N. Fair Oaks Ave. Dept. 20, Pasadena, Calif.

LEARN TO MOUNT BIRDS



ANIMALS, FISH, PETS

Be a Taxidermist. Save your hunting TROPHIES. Have a fine home-museum. Hunters, save and MOUNT your beautiful DUCKS, QUAIL, DEER, TAN skins, FURS. Great Fun. Spare-time PROFITS.

FREE BOOK Tells ALL about it. 100 fine wildgame pictures. 48 pages. SEND TODAY, don't delay. Get this WONDERFUL FREE BOOK, MEN AND BOYS. Learn Taxidermy. Double your hunting pleasure. Rush letter or POSTAL today. STATE YOUR AGE.

N. W. SCHOOL OF TAXIDERMY, Dept. 2401 Omaha, Neb.

I'll Send You This Handsome SAMPLE CASE-FREE

and Show You How to Make Up to $30.00 in a Day

Mail coupon for this Free Tailoring Sample Case packed with 100 beautiful, big-value suit and overcoat fabrics. Take orders from friends, fellow-workers, others, for fine quality, made-to-measure clothes. Pocket big cash profits in advance. Because wearing our suits and overcoats brings more orders, we make it easy for you to get your own clothes without 1c cost. No experience is needed. SATISFACTION GUARANTEED. SEND NO MONEY. Just fill out and mail coupon—today!

PIONEER TAILORING COMPANY, Dept. J-1084

CONGRESS & THROOP STREETS - CHICAGO 7, ILLINOIS

PIONEER TAILORING CO., Dept. J-1084
Congress & Throop Sts., Chicago 7, Ill.

Dear Sir: I WANT A MADE-TO-MEASURE SUIT TO WEAR AND SHOW, without paying 1c for it. Rush details and Sample Kit of actual fabrics, ABSOLUTELY FREE.

NAME _____ AGE _____

ADDRESS _____

CITY _____ STATE _____

Train at Home for a Top-Pay Job in AUTO MECHANICS

Skill adds many extra dollars to your pay check. This is especially true in the auto field, where *100,000 mechanics are needed.* Average pay in some areas is $3 per hour. It's easy to train at home in spare time for a secure job with a bright future, in America's No. 1 industry. *Mail coupon for full details.* No cost nor obligation.

Get Experience Using Tune-Up Kit & Tools

(included with training)

CTI sends you a Tune-Up Kit, the kind that skilled mechanics use to locate engine troubles. You receive a compression Tester; Vacuum Gauge & Fuel Pump Tester; Ignition Timing Light; portable steel case. You also get mechanic's tools, including socket set. You acquire *experience* using kits.

DIESEL MECHANICS OR BODY-FENDER REBUILDING

is yours at no extra cost. Only CTI offers this *extra* choice. You get fully-rounded training in all phases of mechanics.

Many Students Earn Money as They Train

by taking part-time jobs in local shops or fixing cars "on their own." Many make enough to pay all tuition and buy extra equipment. Some open shops, become independent.

Get Facts Now—Decide Later

Your future is worth looking into. Get facts on job and business opportunities. Mail coupon today—Commercial Trades Institute, Chicago 26, Ill.

MAIL TODAY FREE BOOKLETS

COMMERCIAL TRADES INSTITUTE

1400 GREENLEAF AVENUE
CHICAGO 26, ILLINOIS DEPT. A-975

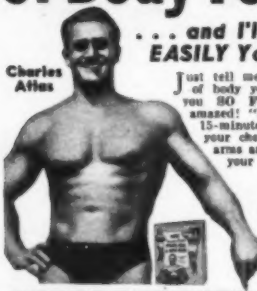
Send booklet, *Big Money in Auto Mechanics, and Sample Lesson.* Both are FREE.

Name _____ Age _____

Address _____

City _____ Zone _____ State _____

# Check the Kind of Body You Want




**. . . and I'll Show You How EASILY You Can Have It!**

Just tell me, in coupon below, the kind of body you want—and I'll give it to you SO FAST your friends will be amazed! "*Dynamic Tension*," my easy, 15-minute-a-day method, will make your chest and shoulders bulge . . . arms and legs surge with power . . . your whole body feel "alive!"

**FREE BOOK** Learn how I became 'World's Most Perfectly Developed Man."—Mail coupon! CHARLES ATLAS, Dept. 6A, 115 East 23rd Street, New York City 10, N. Y.

**CHARLES ATLAS, Dept. 6A,**
**115 East 23rd St., New York 10, N. Y.**
Dear Charles Atlas: Here's the kind of body I want:
**(Check as many as you like)**

- ☐ More Weight—Solid—In The Right Places
- ☐ Powerful Arms, Legs, Grip
- ☐ Broader Chest, Shoulders
- ☐ Slimmer Waist, Hips
- ☐ Better Sleep. More Energy

Send me absolutely FREE a copy of your famous book showing how "*Dynamic Tension*" can make me a new man—32 pages crammed with photographs, answers to vital questions, and valuable advice. No obligation.

NAME _____ AGE _____
(please print or write plainly)
ADDRESS _____
CITY _____ ZONE ____ STATE _____

---

Start your own

## SCREEN-PRINT BUSINESS

*Amazing opportunity for Men & Women who want a Spare or Full-Time Home-Business*

## PRINT *without* a PRINTING PRESS

No big investment. Now, right in your own home – right in your kitchen, spare room, garage – any place you can go into the amazing Screen-Printing business. Print beautiful SIGNS, POSTERS, BANNERS, FABRICS–Anything in fabulous "Glowing" FLUORESCENT COLORS – can be seen for miles. No art ability. It's easy! We supply everything.

## PRINT YOUR OWN MONEY

Things you print literally turn into money. Average $100.00 job costs you less than $10 in materials – you pocket the difference. Big profit opportunities almost everywhere. Some make more, some less, but Mr. J. T. Anderson reports he **earns over $400 a week** printing Greeting Cards certain times of year.

**MEN & WOMEN WANTED NOW**

to help fill the demand for Screen-Printing where you live. Free Samples and Revealing details write:

**Free Samples—MAIL COUPON**

**Screen-Print Co., 15127 S. Broadway, Los Angeles 61, Calif., Dept. 31**
Please send free BOOKLET, "GLOWING" SAMPLES, "HOME-BUSINESS PLAN." All sent free. I am under no obligation ever.

Name _____
Address _____
City _____ Zone ____ State _____

---

## SIGN PAINTING

**Home-Study Course — Only $5.95**

Teaches you commercial sign painting and sign building as it is being done TODAY in leading shops all over the country. Complete practical course for self-instruction. Shows latest methods of truck lettering, office doors, wood letters, reflecting signs, plastics, sprayed signs, gold leaf, silk screen process, up-to-date alphabets, money-making business information, etc.

**SATISFACTION GUARANTEED OR REFUND!**

Contains all the instruction of a high-priced correspondence course. Full price, only $5.95, postpaid. Or C.O.D. plus postage. No risk—order today. Satisfaction or money back! Order "Sign Painting Course." **NELSON-HALL CO., 210 S. Clinton St., Dept. 3AR-3, Chicago 6, Ill.**

---

## 119 JIG SAW PATTERNS

**FULL-SIZE . . . trace on wood and saw out. Clever, ORIGINAL designs, things you can make to SELL. Wall shelves, lawn signs, planters, book ends, others.**

**$1** postpaid

**BURGESS VIBROCRAFTERS, INC.**
Rush $1 today. **DEPT. C-80, Grayslake, Illinois**

---

## HANDWRITING ANALYZE

You can analyze handwriting—at home, in your spare time. No interference with job or social life. Win more pay, social recognition, prestige! Men and women both needed now. Complete lesson and answer service. Personalized instruction. Handsome, suitable-for-framing Diploma to graduates!

**I.G.A.S.** is the oldest and only graphoanalysis school in the world! Write now for three free services: (1) Sample 16-page Lesson (2) Free Entrance Examination (3) Full Color 48-page Success Book. Absolutely No obligation. Adults only.

**INTERNATIONAL GRAPHO ANALYSIS SOCIETY, INC.**
**DESK 37 SPRINGFIELD, MISSOURI**

---

## FREE GERMAN STEEL HUNTING KNIFE

**4-INCH BLADE**

We give you handiest hunting and fishing knife you've ever had! Has 4-INCH LONG highly tempered steel blade—VERY SHARP! Attractive handle. We send knife FREE to acquaint you with our below-wholesale bargains. Please send 25c for handling. NO LIMIT—but send 25c handling for each knife. Order TODAY! **HUNTING KNIFE, Dept. K-362, Box 891, St. Louis, Mo.**

---

## MAKE BIG MONEY

**MAKING COSTUME JEWELRY AT HOME!**

Thrilling spare-time, MONEY-MAKING hobby! Make newest, beautiful jeweled earrings, necklaces, bracelets, pins, pendants, cuff links, tie clips! Quick, easy to make—easier to sell to friends, neighbors, stores, at big profit! Details FREE!

**DON-BAR CO., Dept. A-21**
**3511 W. Armitage Ave., Chicago 47, Ill.**

---

## RUPTURED

### BE *FREE* FROM TRUSS SLAVERY

Surely you want to THROW AWAY TRUSSES FOREVER, be rid of Rupture Worries. Then Why Do you put up with wearing a griping, chafing and unsanitary truss the balance of your life? If you do, it will NOT be through necessity but through choice on your part.

Now there is a new modern **Non-Surgical** treatment that is designed to permanently correct rupture. These **Non-Surgical** treatments are so certain, that a Lifetime Certificate of Assurance is given. Write today for our New FREE Book that gives facts that may save you painful, expensive surgery. **Tells how non-surgically** you may again work, live, play, love and enjoy life in the manner you desire. There is no obligation.

**Excelsior Medical Clinic, Dept. H5124, Excelsior Springs, Mo.**

# MI Classified Ads

Your advertisement can reach this mail-buying audience of a million readers and more for only $1.00 per word . . . payable in advance (Check or M.O. please) . . . minimum 10 words. Copy to be inserted in March issue must be in the office January 3. Mail to MECHANIX ILLUSTRATED, 67 West 44th St., New York 36, N. Y. Word count: Zone number free. Figure one word: Name of state (New Jersey), name of city (New York); sets of characters as in key (14-D); also abbreviations as 35MM, 8x10, D.C., A.C.

## SAVE MONEY • ORDER BY MAIL

### • • • ADVERTISING & BUSINESS SERVICES

500 LIVE NAMES only $3.50. 3x6 Circulars mailed, 500—$1.25, 1,000—$2.00. M. Maloney, M12, Meadows, Bay of Islands, Newfoundland.

ADVERTISE: 24 WORDS, 100 Canadian Newspapers, $5.50. Lists Free. Advertising Bureau, 10511-B Springfield, Chicago 43.

$50 INVESTMENT—$50,000 PROFIT! Stock Market "Killings"! Fascinating details free! Forecasts, Box 87-MI-4, Pelham, N. Y.

### • • • AGENTS WANTED

ATTENTION! HERE is a tremendous potential for men seeking exceptional profits from an accepted, nationally advertised product. No experience necessary, no obligation. Send for powerful, proven sales plan and samples on approval. Special fund raising plan for churches, clubs, etc. Sunshine, 12 Warwick, Springfield 1, Mass. (West of Rockies, write Pasadena 1, Calif.)

"GEM-16" CAMERA $2.00. Free literature! Gem Corporation, POB 545, Tokyo.

GOLD OR Silver Letters, Numbers. Windows, Doors, Trucks. 1" to 6". 500% Profits—Free Samples. Atlas-R, 544 West 79th, Chicago 20.

SEEKING NEW Products? Get my outfit 47 money-making specialties. Latest conveniences for home, car. Send no money. Just your name. Kristee 57, Akron, Ohio.

YOUR OWN business—Suits $1.50; Overcoats 65c; Mackinaws 35c; Shoes 12½c; Ladies' Coats 30c; Dresses 15c. Enormous profits. Catalog Free. Nathan Portnoy Assoc., 2109-M Roosevelt Road, Chicago 8, Ill.

PRINTING, ADVERTISING Salesmen—Excellent moneymaking sideline selling Decalcomania Name Plates, small quantities. Automobile initials. Sign Letters. Free Samples, "Ralco," XL, Boston 19, Mass.

EVERY MAN a prospect. Request free sales kit showing line of belt buckles. Individualized with customer's name and emblems, also cap badges for trucking, bus, taxi, police, firemen. Choice 3000 emblems. Hook-Fast, Box 1425MI, Providence, R. I.

AMAZING GREETING Card Money-Maker—Make $75.00 on 100 Deluxe $1.25 Assortments. Newest 21 for $1 Tall Cards, Gift Novelties, 125 fast sellers. Gift Bonuses besides biggest profits. Experience unnecessary. Stationery samples Free, others on approval. $1.00 Gift for prompt action. Creative Cards, 4401 Cermak, Dept. 518-K, Chicago 23.

CRASY CARDS. Two sets 25c. Catalog free. Dohn-HE-Marks, Broadview, Ill.

SAVE MONEY! Buy Wholesale! Free catalog, general merchandise. Norris, 487-J Broadway, New York.

$25 DAY, EASY. New fire extinguisher. Retails $2.95. Profit $2.00. Free Sales kit. Edconco, 155 East 44th Street, Dept. MI, New York 17, N. Y.

EASY HANDWORK makes fast-selling useful articles. Sample free. Sunmade Company, Brockton 64, Mass.

GUARANTEED HOMEWORK! Immediate Commissions! Free Outfits! Hirsch, 1301-10 Hoe, New York City 59.

FREE SAMPLE! Beautiful Feather Pictures. Send 12¢ stamps mailing. Sylviam, Apartado 9036, Mexico 1, D. F.

EARN $12,000 YEARLY—only two sales daily. World's Best Seller, The Holy Bible (Illustrated) Protestant or Catholic. Margareta's, P. O. Box 92, Hazleton 11, Penna.

60% PROFIT ON Cosmetics—famous nationally advertised Hollywood cosmetics pay 60%. Make $25.00 day up! Hire others. For free samples, details, write Studio Girl, Glendale, Calif., Dept. 5019G.

FOR EASIEST Extra Money, get samples of 1959's fastest-selling Greeting Card Assortments, Gifts, Exclusive Stationery. Lovelier, bigger values, more profitable. Cash bonus, too. Big line. Samples on approval. $1.25 Gift introductory offer Free. Cardinal, 1400 State, Dept. A-58, Cincinnati 14.

NEW 159% PROFIT aerosol wax shoe shine. High lustre polish to any color shoe. Fast seller. Sample $1. Write Easy-Wax-Shine, 74-80 Washington Street, New York City.

MAKE $50-$300 QUICKLY, easily, showing outstanding All Occasion, Easter, Valentine Cards, Costume Jewelry, Gifts, Imprinted Stationery, Household Items. Costs nothing to try. Bonus to 7%. Special Plan for Churches, Organizations. Write for Best-Sellers on approval, Free Surprise Gift offer, Money-Making Details. Hedenkamp, 361 Broadway, Dept. MI-48, New York.

SELL CHAMPION, AC, Autolite Spark Plugs. Reconditioned, electro-plated, guaranteed 10,000 miles. 100% profit. Free sample. City Motors, 2913-M Fannin, Houston 2, Texas.

GOLDMINE OF 600 money makers. Free copy. Specialty Salesman Magazine, Desk 7B, 307 North Michigan, Chicago 1, Ill.

"FOG-STOP" WINDSHIELD Cloth. Instantly removes blurry Mist, Frost, Sleet, Snow. Stops windshield fogging. Samples sent on trial. Kristee 56, Akron, Ohio.

CASH COMMISSIONS at once, taking orders for magazines every family wants! No experience needed. For Free money-making kit, with everything you need, write McGregor Magazine Agency, Dept. 361, Mount Morris, Ill.

$1,000.00 A MONTH for making dramatic 3-second demonstration of amazing lightweight Presto Fire Extinguisher. New chemical used by Airforce snuffs out fires instantly. Only $4.95. Terrific commissions. Millions want it. Free Kit. Merlite, 114 E. 32nd, Dept. P-66T, New York 16.

BUY WHOLESALE—25,000 Items—Catalog 25¢. Matthews, 1480-D4 Broadway, New York City 36.

### • • • SALESMEN WANTED

I'LL SEND you Free stocking sample newest advancement in hosiery since nylon. Patented, full-length. Stays up over-the-knee without supporters, without girdle! Nationally advertised price $1.95. Make money introducing to friends at $1.00 pair. American Mills, Dept. 648, Indianapolis, Ind.

$1,000.00 A MONTH for making dramatic 3-second demonstration of amazing lightweight Presto Fire Extinguisher. New chemical used by Airforce snuffs out fires instantly. Only $4.95. Terrific commissions. Millions want it. Free Kit. Merlite, 114 E. 32nd, Dept. P-66T, New York 16.

IF YOU'RE interested in making money in selling, see the hundreds of exceptional opportunities in Salesman's Opportunity Magazine. Send name for your copy, absolutely free. Tell us what you're selling now. Opportunity, 848 N. Dearborn, Dept. 19, Chicago 10, Ill.

MAKE EXTRA Money. Cash commissions. Everybody buys easy-to-sell Advertising Book Matches. Union label. Big variety—Glamour Girls, Scenics, Hillbillies. Powerhouse selling kit Free. Steady repeat business. No experience necessary. Superior Match Co., Dept. F-159, 7528 S. Greenwood, Chicago 19.

SALESMEN—BIG money every day showing nationally known drain cleaner. No chemicals. Nothing like it. Minute demonstration. Commissions paid daily. Sample furnished. Campbell Co., (Est. 1928), Rochelle 606, Ill.

ANYONE CAN Sell famous Hoover Uniforms for beauty shops, waitresses, nurses, doctors, others. All popular miracle fabrics—nylon, dacron. Exclusive styles, top quality. Big cash income now, real future. Equipment free. Hoover, Dept. A-102, New York 11, N. Y.

PUNCHBOARDS AS large and bold as possible. Send $1.00 for picture catalogue, refundable, first order. Wholesale Distributors, Post Office Box 98, Bothell, Wash.

AD MATCH Sales! Your own business—without investment! Sell for world's largest direct selling manufacturer of advertising matchbooks. Big spot cash commission. Start without experience—our tested sales kit tells you where and how to get order. Men, women—part or full time. Match Corporation of America, Dept. MI-19, Chicago 32.

# MI Classified Advertisements

**AMAZING NEW** Liquid keeps hands clean forever! Not a cleaner—not a detergent—not a soap, but a sensational new chemist's discovery that vigorously resists soil of all kinds. Terrific 60-second demonstration sells on sight. Big extra profit details Free! Jet Products, Wampum 3, Penna.

**BIG MONEYMAKING** Opportunity. Exclusive line uniforms, jackets, pants, shirts, coveralls, sportwear. Advertising embroidered. Every business prospect. Get Selling Outfit Free! Master Co., Dept. K-14, Ligonier, Ind.

**MY FREE** Outfit Puts You In A Fine Business! Just 8 easy orders a day brings you up to $960 *extra* a month in Big Money shoe business! Complete line Air Cushion shoes for men, women. Rush postcard for powerful Free Selling Outfit! Mason, Chippewa Falls K-140, Wisc.

**AMAZING OPPORTUNITY.** New low priced fire alarm protects homes, farms, offices, factories, etc. No wiring—hangs like picture. Pays up to $1,100 a month. Free kit. Merlite (Alarm Div.), 114 E. 32nd St., Dept. F-66T, New York 16, N. Y.

**WILL YOU** wear new suits and topcoats without one penny cost and agree to show them to friends? You can make up to $30.00 in a day even in spare time, without canvassing. Stone-Field, 532 South Throop Street, Dept. J-926, Chicago 7, Ill.

**GET NEW** Shirt Outfit Free: make $90.00 weekly on 5 average orders a day. Famous quality Made-To-Measure dress and sport shirts at $3.95 up sell fast to all men. No experience needed. Full or part time. Write: Packard Shirt Co., Dept. 805, Terre Haute, Ind.

**MAKE MONEY!** Take big profit orders, famous Fruit Trees . . . including sensational discovery—Starkrimson Delicious Apple! Also Dwarfs, Shrubs, Roses, Vines. Sales outfit Free. Stark Bro's, Desk 30119, Louisiana, Mo.

## • • • BUSINESS OPPORTUNITIES

**YOUR OWN** High Profit Business. Sell Name Brands, full or part time. No inventory—no investment. More than 2000 Name Brand items; lowest wholesale prices. Watches, jewelry, cameras, hi-fi radios-phonos., appliances, housewares, hardware, power tools, luggage, musical instruments, garden equipment, sporting goods, toys, many others. 8 floors of Name Brands. Million dollar inventory. Orders shipped complete within 24 hours! Send for Free beautifully illustrated catalog Now! Separate dealer price list. H. B. Davis Corp., Dept. 16, 145 West 15 St., New York 11, N. Y.

**GROW EXPENSIVE** herbs for us! Big profits home-business of your own. Year around profitunity! We supply everything necessary! Send for free rare seeds and revealing plan. (State your age.) National Herb Exchange, Dept. JY, Gardena, Calif.

**BOOK** "505 ODD, Successful Businesses" free. Work home! Pacific-23C, Oceanside, Calif.

**LEARN PROFESSIONAL** TV servicing in one week's fabulous new simplified system. No big expense. No studying. No tools or equipment. Spare, full time. Own your own big profit business! Save! Amazing but true! Free! Write, TV Systems, Dept. CC-151, 1038 So. La Brea, Los Angeles 19, Calif.

**"50 NEW HOME-BUSINESS** Ideas" booklet, sample free. Spray exotic Velvet-Suede on anything. Flokcraft-JY, Los Angeles 61.

**IMPORT-EXPORT OPPORTUNITY,** profitable, world-wide, mail-order business from home, without capital; or travel abroad. Established world trader ships instructions for no-risk examination. Experience unnecessary. Free details. Mellinger X-751, Los Angeles 24.

**GROW A** living Miniature Forest or orchard (only inches high), that bears tasty tiny fruit at home. Learn amazing Dwarfing secrets! Fascinating hobby. Profitable Home-business Opportunity. Free Seeds and Plan. (State your age.) Miniature Nurseries, Dept. JY, Gardena, Calif.

**$250.00 WEEK PROFIT** possible. Earn at home spare time with fascinating Printing method. $5 starts you—send no money now. Free Confidential Facts and Valuable Samples. Screen-Print JY, Los Angeles 61.

**YOUR ENVELOPES** addressed accurately, reasonably. Fast service. We have capable addressers in your city. Glenway System, Box 6568, Cleveland 1, Ohio.

**11,000 NEW PROSPECTS** Daily. Baby record books, shoes, albums. Sell mail-order. Use our literature. Write: No-Co-Ro, Capitola 16, Calif.

**VENDING MACHINES**—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 2, 715 Ensor St., Baltimore 2, Md.

**GROW ORCHIDS** at home. Profitable, fascinating. Successful home grower explains special light, temperature and humidity conditions orchids need. Free—full details. Orchids, 100 S. Vermont, Los Angeles 4.

**FIX TYPEWRITERS.** Inexpensive home course teaches Factory Secrets. Free Booklet. Write, Typewriter, Tarentum 3, Penna.

**$70 WEEKLY**—HOME, spare time. Simplified mail bookkeeping. Immediate income—easy! Auditax, 34757E, Los Angeles 34.

**BRONZE BABY** Shoes: Instructions, Equipment and Mountings for genuine Electroplating Process. Largest Supplier of all Plating Equipment, Supplies. Free Catalog. Hollywood Bronze Supply, Dept. B-5, 1624 East First, Los Angeles 33, Calif.

**PLATE BABY** shoes, jewelry, gifts, bronze and colored pearl. Free booklet. Bronzkrafters, 11029 South Vermont, Los Angeles 44.

**BE A HOME MANUFACTURER.** Make the highest profits. Our Sales Organization gets the orders—helps sell your products. Build luggage and cases for 1001 needs. We supply instructions, supplies—everything. Work full, sparetime. Details FREE. Abarsi, 807-VI Sunset Blvd., Los Angeles 12, Calif.

**GUARANTEED MARKET!** Earn ready cash raising fishworms for us! Backyard, garage, basement! We buy your crop! Exciting details free! Oakhaven-45, Cedar Hill, Texas.

**NEW HOME-IMPORT** Mail Order Profitunity! Your mailbox stuffed with money! No Selling. No experience. No investment. We supply everything. Free Details. Mail Order Distributors (Import Division), 15201 South Broadway, Los Angeles 61C1, Calif.

**BRUSH PLATING** Outfits for plating articles in the home and shop. No tanks necessary, Silvering Mirrors, spare or full time. Free Particulars. Gunmetal Co., Ave. A, Decatur, Ill.

**QUICK MONEY!** "Repairing Car Batteries." At home! Easy too! Free Details! Batteryman, Penrose, Colo.

**BUY DIRECT** from Factories—Appliances, Cameras, Watches! Free details! CAM Company, 6810MI, 20th Ave., Brooklyn 4, N. Y.

**FREE "FRANCHISE** Profit Letter" describes nationwide opportunities. Exclusive distributorships, dealerships, agency operations. Write today. National Franchise Reports, MI-528, 333 North Michigan, Chicago 1.

**GROW MUSHROOMS.** For pleasure. In Boxes, Lawns, Pastures, Grasslands, Farmlands, Gardens. Send $1.00 for Spawn, Instructions. Thomas Company, F. 3604—30th S.W. Seattle, Wash. Copyright c 1958.

**CLEANS WINDOWS** without mess. Strange "dry" cleaning-cloth. Replaces liquids. Windows gleam. Samples sent on trial. Kristee 105, Akron, Ohio.

**BE APPOINTED** State Notary Public. Write—Notary Publics', 3230-AI Stoner, Los Angeles 66, Calif.

**HAVE FUN!!** Miniature Golf in your back yard. Simplified plans, $1.00. Income possibilities. Golf, 720 E. War Memorial Drive, Peoria, Ill.

**MAKE FLEXIBLE** molds. Cast plaques, figurines. Free sample. Tooker, 1045-E Fairview, Hamilton, Ohio.

**BAKE NEW** Greaseless Doughnuts in kitchen. Sell stores. Free recipes. Irving Ray, 3605 South 15th, Minneapolis 7, Minn.

**OPPORTUNITY TO** earn $15,000-$30,000 annually. Franchise protected. Granted on $12,500 basis. Live at home. No merchandise to buy. Selfemployed. One of most exclusive and noncompetitive Businesses in United States and Canada. Send for free explanatory booklet. Harrell & Company, Box 8-F, Louisville, Ill.

**LIQUID MOLDING** Rubber, Free Sample Shellcraft Supplies. Chaney, 1907-B East Road, Jacksonville 11, Fla.

**COSTS** 8¢—RETAILS $1.00. Needed automotive product. You manufacture, distribute, easily. Everything furnished. Wilson, Box 505-AJ, Princeton, W. Va.

**COLORGLAZED CONCRETE** pottery made without molds. Patented method. Cemetery products, novelties, tiles. Basement leaksealing. Moneymaking projects. Booklets, details free. Men only. National Pottery, Grand Rapids, Minnesota.

**OPERATE PROFITABLE** mailorder business!! Write: Bond, 1637-K West Vernon, Phoenix, Ariz.

**CASH FROM** Sawdust, Tin-Cans, Newspapers. Over 200 methods. Instructions $1.00. Charles Company, 12-XDY, Norwood, Ohio.

**GROW MUSHROOMS.** We buy mushrooms and pay high prices. Use cellar, shed and outdoors. Spare, full time, year round. We sell 100% pure Cultured Mushroom Spawn. Free Book. Mushrooms, Dept. 183, 2954 Admiral Way, Seattle, Wash.

**MAKE $25-$50** WEEK, clipping newspaper items for publishers. Some clippings worth $5.00 each. Particulars free. National, 81-X, Knickerbocker Station, N. Y.

# Classified Advertisements MI

MINK RAISING information free. Complete. Lake Superior Mink Farm, Superior, E.E. 9, Wisc.

"HOW TO build your own mail order business." Everything supplied. Details free. Wayne's Service M-I, 3016 Channing, N. E., Washington 18, D. C.

WANTED: HOME producers, to be subcontractors. Cast plastic products for manufacturers in our Clearing House Service. Thousands of easily-made items required. Cash in at home, without previous experience. Plastic Service Associates, Dept. I-MI, East Boston 28, Mass.

$30-$60 WEEKLY ADDRESSING envelopes. Instructions $1, refundable. Reiss, 210 Fifth Ave., Suite 1102-A, New York 10.

FREE BOOK "990 Successful, Little-Known Businesses." Work home! Plymouth, 1610—43rd Street, Brooklyn 48, N. Y.

$20 DAILY IN spare time plating baby shoes, jewelry, novelties. Free details. JO-CA Electroplater, 7840-S Northwest Sixth Court, Miami 50, Fla.

QUICK-BRICK. HOME improvement bonanza. Speedy production, our methods. High profits. Work from home. Stone-Craft, Box 856-D, St. Louis, Mo.

$6,000 FOR MISTER! Mrs.: $3,500! Free "Secret Journal" Plan. Magical! Work home. Publico-NN3, Oceanside, Calif.

TREMENDOUS PROFITS buying merchandise wholesale! Free details! Heritage, 210-MI19 Fifth Ave., New York 10, N. Y.

QUICK PROFITS, with no capital! Take orders for magazines your neighbors like, want. Make cash on the spot! We show how with Free kit. Get yours now. Write McGregor Magazine Agency, Dept. 371, Mount Morris, Ill.

MAKE MONEY clipping newspaper items for publishers! Newscraft, BMI-983-E. Main, Columbus 5, Ohio.

LEARN SEWING Machine Repairing. To $125 weekly. Sparetime. Supplies. "Add to present business." Shipping from Chicago, New York, Los Angeles. Write today! Taylor Service, Box 2126, San Bernardino, Calif.

MAIL NEWSPAPER clippings daily for cash. Ketchum's Advertising, BIO58, Springfield, Ill.

MUSHROOMS QUICKER, Easier, Cheaper. Magic Trays. Newest Facts Free. Spawn $1.00. Luxurco, 641 South 19th, Newark 3, N. J.

PIANO TUNING learned at home quickly. Tremendous field! Musical knowledge unnecessary. Be independent! Information free. Empire School of Piano Tuning, Champaign, Ill. (Founded 1935).

MAKE $46 FROM Square Foot Plywood; Jigsaw necessary. Free Details. Woodet, Bridgewater, Mass.

$1,000.00 A MONTH distributing VX-6. Restores car's battery. Sales guaranteed. Exclusive opportunity. Free kit. National Dynamics, 220 East 23rd, Dept. CR-I, New York City.

MAKE DURABLE building plastic easily. Beautiful—101 uses—800% profit. Bays Laboratory, Keams Canyon, Ariz.

NEED MONEY? Take import orders. Sample $1. Information: Polizzi, Box 31042, Los Angeles 31, Calif.

WANT TO Make Big Money At Home? $10.00 profit in an hour possible with Invisible Mending. Make tears, holes, disappear from clothing, fabrics. Steady year-round demand from cleaners, laundries, homes. Details Free. Fabricon, 6254 Broadway, Chicago 40, Ill.

"MAILORDER LAWS and Regulations," $1.00. Explains licenses, taxes, legal requirements. Tasker, Box 3131-M, Alexandria, Va.

## • • • HELP WANTED

COPYRIGHTED REPORTS. Best paying jobs with travel, adventure, promotions. Construction, aviation, shipping, oilfields, laborers, clerical, trades, supervisory, factory, unusual opportunities. Skilled-unskilled. Foreign-stateside. Men-Women. Only $2.00 ($2.25 Airmail) (COD'S Accepted), including registration-advisory service. Satisfaction guaranteed. Included free: Special reports on Alaska—Venezuela—South American opportunities—husband & wife foreign jobs. Research Services, Suite 514 MI, Meramec Building, St. Louis 5, Mo.

EARN BIG Money. Be a Success. Grasp your opportunity now by sending $2.00 for U.S.A. Overseas Job List plus Guide Book aiding you to get the job you want. Futures Unlimited, 222 West 33rd Street, New York City 1.

FOREIGN JOBS—Latin America, Alaska, Canada, up to $1500 monthly. Up-to-date 1959 Foreign Service Directory gives complete information; hot list of firms hiring for Military and Civilian Construction, Aircraft, Oil, Exporters-Importers, Mining. How-When-Where to apply. 11th successful year. $1.00. Global Reports, Box 8873-MI, Los Angeles 8, Calif.

AMERICAN OVERSEAS Jobs. High Pay, Men, Women. Transportation Paid. Free Information. Transworld, Dept. 9M, 200 West 34th St., New York 1.

FLORIDA'S BOOMING! 528 new plants in two years. Special statewide analysis airmailed $2.00. SunGlo Service Bureau, Tallahassee 1, Fla.

BOOMING LATIN America! Mexico, Venezuela, Brazil, etc. Salaries over $1,000.00 monthly U. S. Tax exempt. All skills required. Direct information on opportunities, conditions, American companies employing. New report! Air Mailed—$3.00. Paul B. Smith, Apartado 172, Maracaibo, Estado Zulia, Venezuela.

JOBS $400 MONTH. Merchant Marine. Write Box 1804W, Paterson, N. J. Beginners only.

FOREIGN EMPLOYMENT information. Adventure, travel. Earn big money overseas. Europe, South America, Far East, Canada, Alaska. Truck drivers, clerks, construction workers, etc. Full information, sample letter, application blanks sent by return mail. Send $2.00 to Foreign Bureau, Department 101, P. O. Box 512, New Orleans 1, La.

JOBS OVERSEAS! Janecek Development Co., 1091 Hub Station, New York 55, N. Y.

LIVE IN Beautiful Ohio Valley, jobs available. Sunday classifieds mailed $1.00. Mattco, Box 283, Evansville, Ind.

CARPENTERS-LABORERS-DRIVERS. FOREIGN Project. Bonus Pay. Free Information. Employment Headquarters, Dept. 100, 79 Wall Street, New York 5.

FLORIDA JOBS Available. Sunday classified $1.00. Grimm, Box 1781, Tampa, Fla.

## • • • MONEYMAKING OPPORTUNITIES

OUR BANK president loves the big deposits he gets from our home mail order business. Details free. Write today. Spring Warrior Farms, Perry 1, Fla.

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 15, 715 Ensor St., Baltimore 2, Md.

SELL TITANIA Gems; far more brilliant than diamonds. Catalog 10¢. Diamonite, 2420-X 77th, Oakland 5, Calif.

START YOUR Own Business On Credit (U. S. and Canada). Your own boss. 1425 Dealers sold $5,000 to $32,000 in 1957. We supply stocks, equipment on credit. 200 home necessities. Sales experience unnecessary. Pleasant profitable business backed by world-wide industry. Write Rawleigh's, Dept. A-U-MOM, Freeport, Ill.

MAKE $5,000 YEARLY sparetime raising mink, chinchillas, nutria, etc. Free booklet reveals proved plans. Write: Furs, 588 Mt. Pleasant Road, Toronto 3, Can.

MEN—WOMEN! Start Money-Making Plastic Laminating Business at home in spare time. Material that costs 11¢ brings back $2.58. No canvassing or selling but mail orders bring in $20 a day. Write for full particulars Free. Rush name on postcard to Warner, Room CL-4-A, 1512 Jarvis, Chicago 26, Ill.

MAKE EXTRA Money. Cash commissions. Everybody buys easy-to-sell Advertising Book Matches. Union label. Big variety—Glamour Girls, Scenics, Hillbillies. Powerhouse selling kit Free. Steady repeat business. No experience necessary. Superior Match Co., Dept. FX-159, 7528 S. Greenwood, Chicago 19.

LEARN PEST Control! $1000.00 Monthly proved. Rid homes, farms, businesses of termites, rodents, pests. New short-cut methods! It's easy, fascinating! Huge demand. Free details. APCOA, Dept. 3P, 15015 Ventura Blvd., Sherman Oaks, Calif.

DETECTIVES—EXCELLENT opportunities. Experience unnecessary. Detective Particulars free. Write, George Wagoner, 125-J West 86th, New York 24.

BECOME INDEPENDENT with your own franchise business. Thousands earning handsome incomes. Request interesting facts today. National Franchise Reports, MX-528, 333 North Michigan, Chicago 1.

BUSINESS OF your own. Earning potential as high as $40,000 annually. Issued on $12,500 base. No merchandise to buy. Send for free explanatory booklet. Harrell & Company, Box 8-FF, Louisville, Ill.

ATTENTION! MEN, Women! Earn extra cash, address advertising postcards. Langdons, Box 41107-M, Los Angeles 41, Calif.

GROW MUSHROOMS. We buy mushrooms and pay high prices. Use cellar, shed and outdoors. Spare, full time, year round. We sell 100% pure Cultured Mushroom Spawn. Free Book. Mushrooms, Dept 184, 2954 Admiral Way, Seattle, Wash.

SELL ELECTROLUNCH — Electric hot lunch bucket. Electric Lunch Kit Distributors, Route 1, Box 163, Waukegan, Ill.

INVISIBLE REWEAVING: $5 in one hour possible reweaving burns, tears, mothholes. Spare-full time. Free Details. Skil-Weave, Dept. SC-361, 335 W. Madison, Chicago 6.

DOUBLE YOUR profit! Use beautiful velvet Flock finish. Brochure $1.00. Spray guns $4.95. Modern, 1 Bahret, Poughkeepsie, N. Y.

# MI Classified Advertisements

REPAIR AND Customize automobiles, boats, etc., with Bondit. Quart $3.85. Quarter midget fiberglas bodies complete $39.95. Glassgo, Browns, Ala.

$30-$60 WEEKLY ADDRESSING envelopes. Instructions $1, refundable. Reiss, 210 Fifth Ave., Suite 1102-B, New York 10.

MAKE MONEY Writing Short Paragraphs! No tedious study. I tell you what to write, where and how to sell; and supply list of editors buying from beginners. Many small checks add up quickly. Write to sell, right away. Send for free facts. Benson Barrett, Dept. C-78-A, 7464 Clark, Chicago 26.

MAKE MONEY clipping newspaper items for publishers! Newscraft, MI-983-E. Main, Columbus 5, Ohio.

EARN CASH at once, sending us easy orders for magazines your friends, neighbors want. Instant profits! We show how. For Free kit, everything you need, write McGregor Magazine Agency, Dept. 381, Mount Morris, Ill.

START BIG-PAY Business At Home in spare time. No experience needed to operate little table-top machine for bronzing baby shoes. Make $5.46 profit on every pair. Full particulars Free. Send postcard to Mason, 1512 Jarvis, Room CM4A, Chicago 26, Ill.

EARN GOOD money mailing circulars. Write: Leeway, Mountain View-MI-1, Okla.

$1,000. MONTHLY POSSIBLE, raising Earthworms—African Giants. Backyard, Garage, Basement. Complete Illustrated Booklet, explains raising, feeding, packing, marketing. Only 25¢! Ozark Worm Farm-4, Willow Springs, Mo.

$6,000 FOR MISTER! Mrs.: $3,500! Free "Secret Journal" Plan. Magical! Work home. Publico-JJ2, Oceanside, Calif.

AVERAGE $1.00 HOURLY sorting our product at home! Numisales, 328-X Eleventh, West Bend, Wisc.

GOOD INCOME full time, part time, write Sound Control, Box 2531, Salt Lake City 10, Utah.

MAKE $25-$50 WEEK, clipping newspaper items for publishers. Some clippings worth $5.00 each. Particulars free. National, 81-X, Knickerbocker Station, New York.

FLORIDA OPPORTUNITIES, job openings for all ages. Live in the Sunshine. Details Free. Write Charles Masten, Box 4571, Waughtown Station, Winston-Salem, N. C.

FABULOUS PROFITS. Imported Bird Pictures Hand Made With Real Feathers. Free Brochures. Layne Imports, 6950 E. Gage, #6 Bell Gardens, Calif.

FORTUNES MADE by prospectors! We teach you! Recognize valuable mineral deposits in your home area. Free information. Modern Prospector, 3433 Essex Road, Cheyenne, Wyo.

PRIZE CONTESTS provide Fabulous Home Income Opportunity! Latest Books! How and Where to Win Your Share! Send Stamp! National Contest Bulletin, Box 2685-R, Miami 16, Fla.

MUSHROOMS QUICKER, Easier, Cheaper. Magic Trays. Newest Facts Free. Spawn $1.00. Luxurco, 641 South 19th, Newark 3, N. J.

MAKE 20 FILTERTIP cigarettes for 9¢. Factory-fresh pipe tobaccos. Facts free. Moberly, 844, Owensboro, Ky.

EARN $240.00 A Month at home, spare time doing only Two $5.00 Invisible Mending jobs a day. Big money paid for service that makes cuts, tears disappear from fabrics. Steady demand. Details free. Fabricon, 6256 Broadway, Chicago 40, Ill.

MAIL TRADE magazine has moneymaking opportunities galore. Sample 25¢. Donovan, 79-M Greenbelt, Levittown, N. Y.

MAKE BIG Easy Profits making costume jewelry at home in spare time! Quick, easy to make; easier to sell! Details Free! Don-Bar, 3511 W. Armitage, Dept. A-212, Chicago 47, Ill.

FREE FOLIO "$5,000-$45,000; Unlimited Vacations." No merchandise. Unknown! Work home! Haylings-M7, Carlsbad, Calif.

MAKE MONEY addressing!! Write—Merrill Histand, Box 182MI, Hatfield, Penna.

## • • • PROFITABLE OCCUPATIONS

GROW MUSHROOMS. We buy mushrooms and pay high prices. Use cellar, shed and outdoors. Spare, full time, year round. We sell 100% pure Cultured Mushroom Spawn. Free Book. Mushrooms, Dept. 102, 2954 Admiral Way, Seattle, Wash.

GUARANTEED MARKET! Earn ready cash raising fishworms for us! Backyard, garage, basement! We buy your crop! Exciting details free! Oakhaven-3, Cedar Hill, Texas.

$5,000 FROM HALF Acre growing Ginseng, crop bought. Particulars 10c. Associated Growers, Sperling, Manitoba.

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 16, 715 Ensor St., Baltimore 2, Md.

JOBS—HIGH Pay; USA, So. America, The Islands. All trades. Many companies pay fare. Write Dept. 71K, National Employment Information, 1020 Broad, Newark, N. J.

FOR FAME, Fortune and Fun get started in Country and Western Music. Radio, Television, Records, Band. Be successful entertainer. Free booklet tells all. Write: Rairden's Associates, 85-C Frederick Place, Mount Vernon, N. Y.

MUSHROOMS QUICKER, Easier, Cheaper. Magic Trays. Newest Facts Free. Spawn $1.00. Luxurco, 641 South 19th, Newark 3, N. J.

DETECTIVES—MAKE Secret Investigations. Interesting occupation. Write, George Wagoner, 125-J West 86th, New York 24.

## • • • BARGAINS—WHOLESALE

BIG MULTICOLOR Wholesale Catalog! Housewares, appliances, clothing, silverware, cookware, luggage, binoculars, shavers, radios, phonographs, cameras, projectors, recorders, typewriters, sewing machines, furniture, power tools, toys, sporting goods, watches, diamonds, jewelry, automobiles, etc. Name brands. Huge discounts. Postcard: Selbyco, Decatur 128, Ill.

ACCORDIONS WHOLESALE! Save ½. Home trial. Free catalog. Accordion Warehouse, Dept. 19-MXW, 2003 Chicago, Chicago 22.

BUY WHOLESALE! 25,000 Nationally Advertised Products. Get Amazing Dealer Catalogs. Complete Details Free. American Wholesalers, 1841W, Levee, Dallas 7, Texas.

LARGEST WHOLESALE supply in U. S. Free catalogs. Furniture, clothing, appliances, housewares, automobiles and accessories, farm equipment, tools, hobby supplies, new products, imports. Free details. Associated Wholesalers, Box 52-MX, Burlington, Iowa.

BUY WHOLESALE! 100,000 Nationally Advertised Products. Appliances, Cameras, Sporting Goods, Housewares, Watches, Typewriters, Tools, Clothing, etc. Discounts to 80%. Buy-Rite, Box 258, Hawthorne 24, N. J.

50 KEYCHAINS $1.00, ENTIRE family's lifetime supply. Laurie, Box 250, New Rochelle, N. Y.

BARGAINS GALORE! Hundreds of Items actually less than wholesale. Free catalog. Welk's Co., Dept. MI, 925 W. Sycamore St., Willows, Calif.

ELECTRIC GUITARS, amplifiers, wholesale, free catalog. Carvin MI, Covina, Calif.

## • • • CHEMICALS & SUPPLIES

BOOKLETS! "CHEMISTRY," "Physics," "Astronomy," "Science," "Relativity," "Electricity," "Radio," "Light," "Tables," "Mathematics," 10¢ Each. Franks, 3121 South Racine, Chicago 8.

SPECTROSCOPE FOR quick analysis $3.00. Cuttingco, 26278 Arastradero, Los Altos, Calif.

EXPERIMENTERS: "BARGAINS Galore" Supplies Catalog, 25¢. Hagenow Laboratories, Manitowoc, Wisconsin.

CHEMISTRY-SCIENCE-ROCKETS. LITERATURE Free. "Lankton," Box 5283-B6, Lansing, Mich.

## • • • OF INTEREST TO WOMEN

"8 MISTAKES PARENTS Make." Every parent should have this new book about child training. It is free; no obligation. Simply address Parents Association, Dept. 941, Pleasant Hill, Ohio.

$1,000-$5,000. YEARLY POSSIBLE, addressing envelopes, postcards, for advertisers! Further information free. Mann, 427-D, Woodcliff Lake, N. J.

MAKE $25 TO $35 weekly addressing envelopes. Our instructions reveal how. Glenway, Box 6568, Cleveland 1, Ohio.

## • • • FORMULAS, PLANS

LATEST—BEST Formulas. Genuine Moneymakers. Free literature. Kemistry, Park Ridge 40, Ill.

EXCLUSIVE MANUFACTURING Formulas and Processes. List Free. Moon, Martville, N. Y.

ANY FORMULA $3.00. Catalog—Mfg. Treatise 10c. J. Belfort, 192 N. Clark, Chicago 1.

LARGE FORMULA Catalog 10¢. Big Surprise. Western Chemical, Salem, Ore.

## • • • GEIGER COUNTERS, TREASURE FINDERS

FIND LOST or hidden treasures with new transistor metal detector, underwater metal detectors, scintillation counters, etc. Free literature. Gardiner Electronics, Dept. 3, 2545 E. Indian School Road, Phoenix, Ariz.

GOLD-SILVER DETECTORS. Geiger Counters. Violites for tungsten, etc. Best available. Guaranteed. Information Free. Detectron, 5528 Vineland Ave., North Hollywood, Calif.

TRANSISTORIZED M-SCOPE unexcelled detecting treasures, gold, silver, etc. Lightweight, supersensitive, dependable. From $59.50, Easy Terms. Free Catalog. Fisher Research, Dept. C-4, Palo Alto, Calif.

TREASURE LOCATORS! Exciting handbook 25¢. Howe, 811 Kansas, Atchison, Kans.

### • • • PRINTING, MULTIGRAPHING, MIMEOGRAPHING

100 6¾ ENVELOPES, 100 5½x8½ Letterheads printed, $2.00. Millard Fortney, P3, Dillsburg, Penna.

FREE BUSINESS Printing Catalog; Samples. Howprint, 723-L Eunice, Webster Groves 19, Mo.

PENNY PRINTING — Envelopes, letterheads. 100 Minimum. 109 North Adams, Burlington, Iowa.

BUSINESS CARDS with Glamour. Reasonable. Samples Free. Heavener's, Colmar, Penna.

1,000 BUSINESS CARDS, "Raised Letters" $3.50. Samples. Pioneer MI-1, Island Park, N. Y.

### • • • PRINTING OUTFITS & SUPPLIES

PRINTING OUTFITS, type, supplies. Send dime for illustrated supply book and samples. Kelsey, Inc., H-57, Meriden, Conn.

MAKE YOUR Own self-molding rubber stamps and printing cuts. Plexirubber, Argyle 3, Wisc.

### • • • RUBBER STAMPS & MARKING DEVICES

THREE LINE cushion stamp $1.00. Eldredge Industries, 152 Rosemont Ave., Trenton 8, N. J.

### • • • STAMP COLLECTING

GIGANTIC COLLECTION Free—Includes Triangles—Early United States—Animals—Commemoratives—British Colonies—High Value Pictorials, etc. Complete Collection plugs Big Illustrated Magazine all free. Send 5c for postage. Gray Stamp Company, Dept. MI, Toronto 5, Can.

FREE 102 WORLDWIDE Stamp Assortment. Approvals. Send Dime for handling. Linstamp, St. Catharines 620, Ontario.

WOW! 110 ALL Different Germany 10¢ Zeppelins, Semi-Postals, Airmails, High values, etc. Giant Catalog, bargain lists included with beautiful approvals. Jamestown Stamp, Dept. A19MI, Jamestown, N. Y.

UNITED STATES commemorative collection containing 33 different—10c. Approvals. White, 516-M Avenue L, Brooklyn 30, New York.

FREE 103 BRITISH Colony Stamps. Approvals. Enclose 10¢ for handling. Niagastamp, St. Catharines 673, Ontario.

225 STAMPS FOR Only 10c! This mammoth value includes Airmails, Pictorials; stamps from strange Countries cataloguing up to 25c each! Also approvals. Mystic Stamp Company, Camden 30, N. Y.

FREE! GIANT Bargain Catalog—New Edition listing thousands of bargains including U. S. and B. N. A. stamps, packets, mixtures, albums, accessories and supplies; sent with beautiful approvals. Jamestown Stamp, Dept. A19MI, Jamestown, N. Y.

TOPS! FREE book, "How To Collect Stamps." Send for your copy today! Approvals. Littleton Stamp Co., Littleton E4, N. H.

WEIRD DIAMOND Shape Coffee Stamps. Lovely Flower Triangle! First American big commemorative. Greenland, Idol Dancer, etc. Free with approvals. Capital Stamp Co., Ferrysburg 5, Mich.

ALBUM ONLY 10¢! Hundreds of Spaces! Stampmart Company, Hartford 1, Conn.

TWO $5.00 U. S. Postage Stamps Free to approval buyers. Send dime for postage, details. Irwin Stamp Co., Box 11-65, Brooklyn 30, N. Y.

FREE 40 EXOTIC Giant Pictorials! Free 144-stamp Worldwide Mix! Free Stamp Newspaper! Free Illustrated Bargain Lists! With approvals. Rush 10¢ for postage. Philatelics, Dept. V, New Paltz, N. Y.

FREE PICTORIAL Packet! Includes bicolors, flowers, Andorra, Iceland, Toga, Malta, Singapore, birds, sports, other fine stamps. Send 10¢ for handling. Approvals. Champlain, Isle LaMotte, Vt.

OLD SCARCE U. S. Seconds On Approval. Slight imperfections, lowest prices. Hernfelder, Clintonhill Sta., Newark 8, N. J.

ECONOMICAL ½-3¢ APPROVALS. 33,000 varieties. Dresel, Box 128-B, West Englewood, N. J.

FREE UNITED States catalog. H-S Company, 45MI Bromfield, Boston 8, Mass.

GIANT DIAMOND, midget triangle, timor, 15 beautiful topicals, 26 others 10¢ with approvals. Carpenter, 306 So. Mills Ave., Claremont, Calif.

FREE 20 LARGE Pictorials. Approvals. Burns, Box 3761X, Honolulu 11, Hawaii.

14,000 DIFFERENT! AMAZING new plan builds your collection systematically, country by country. Only 50¢ weekly. Free details. L. G. Ware, Stepney 22, Conn.

200 DIFFERENT BELGIUM 50¢—Penny approvals included. Reed, Box 980, Chicago 90, Ill.

FREE ILLUSTRATED U. S. catalog! Bailey, 45 Bromfield, Boston 8-M, Mass.

100 OLD UNITED States between 1861 and 1935, $1.00. Roush Stamps, 51 Chestnut, Mansfield, Ohio.

FREE! NEWFOUNDLAND, Israel, Animals, Birds, Sports, Fipex; with approvals. Tropicana, Box 449-I, Hollywood, Fla.

EXCITING "STRANGE countries" packet. Free with approvals! Saxon, Orange, Calif.

105 DIFFERENT WORLDWIDE from Liberia, Macao, etc., cataloging over $2.75 only 10¢. Approvals. Goliath, Bethlehem, J4, N. H.

FREE—YOUR choice any volume Scott's Loose Leaf Deluxe $13.50 Albums, 1959 Scott $11.00 catalogue even worlds finest Master Global $18.75 Album Free when you buy our sensational Foreign Approvals. Bargain Stamps, Redlands, Calif.

U. S. STAMPS, Giant Bargain Catalog—15¢. Raymax, 35-VL Maidenlane, NYC 38.

EXCITING VARIETY Old U. S. Flags, Famous Americans, Presidents, Commemoratives, approvals plus Free packet 10¢ handling. Metropolitan Stamps, Box 312HAX, Jackson Heights, N. Y.

1000 DIFFERENT With approvals. Jacobsen, 4375 Broadway, New York 40, N. Y.

RED RUSSIA—28 all different unused, high catalog, 5¢. Approvals. Hamilton, 912 North Mesa, El Paso, Texas.

WORLDWIDE 50 STAMPS Free, Introducing Inexpensive Approvals. University Stamps, P. O. Box 95, Tamiami Station, Miami 44, Fla.

COLLECTION 100 DIFFERENT United States stamps. Contains commemoratives, airmails, regular issues, high denominations, including some over 70 years old. Worth over $1.00 but our price only 20¢ with approvals. Sundman, Littleton T4, N. H.

FREE! GIANT Bargain Catalog—New Edition listing thousands of bargains including U. S. and B. N. A. stamps, packets, mixtures, albums, accessories and supplies; sent with beautiful approvals. Jamestown Stamp, Dept. E19MI, Jamestown, N. Y.

25 DIFFERENT COMMEMORATIVES. 1893 up 10¢. U. S. Approvals. K & B, Box 70, Brooklyn 23, N. Y.

200 DIFFERENT ARGENTINA, $1.00. Doc Shoenfelt, 259 Tower, Mansfield, Ohio.

FREE U. S. 64 page illustrated catalogue. Stone, 260 Washington St., Boston 8M, Mass.

TRADE YOUR Duplicates toward our approvals! (Foreign only.) Complete detailed information, 10¢. (Refundable.) Variety Stamp Service, Box 99-L, Newton Highlands 61, Mass.

SEND 100 DIFFERENT stamps and dime. Receive 120 all Different. Scheerer, Box 301, Pottsville, Penna.

1000 STAMPS, WORLDWIDE, Excellent Variety $1.00. No approvals follow. Harrison's Stamps, 1435 1st Ave., Oakland 6, Calif.

"SPUTNIK;" EGYPTIAN Jets; Israel Musicians; Minute-Man; etc., with purchases. Details; Approvals. Stamp Farm, 13-2, Oxford, Wisc.

60 DIFFERENT U.S. (30 Commemoratives) 25¢. No Approvals. Seidenberg, Appleton, Wisc.

100 LARGE U.S. commemoratives only 25¢ with approvals. Wm. Rice, 87 Washington Ave., Kingston 16, N. Y.

100 DIFFERENT BELGIUM Free. UPU, Brussels Fair. Railroad Stamps Free. Approval Applicants Only. Trylon, Box 179-M Forest Hills 75, N. Y.

UNITED NATIONS five different 10¢ approvals. Anderson, 1112 Harrison, San Francisco 3, Calif.

### • • • COIN COLLECTING

WORLD'S GREATEST Bargain Catalogue $1.00 (Deductible first $10.00 Order). 1958 Proof Set $2.95. $5.00 Gold $12.45; 15 different Indian cents $1.75. Any 10 Whitman folders $3.50. Bebee's, 4514 North 30th, Omaha 11, Nebr.

TEN DIFFERENT Indian Cents $1.00; Free List. Collector's Bargains, Box 356G, New Hope, Penna.

# MI Classified Advertisements

WANTED URGENTLY! Coins! Now we pay even higher prices! Confidential 1959 Buying Guide. $1.00. Sullivan, 128-GG Frontier Bldg., St. Paul 1, Minn.

COINS FROM Formosa, Vatican, etc., plus foreign banknote, 10¢ with coin approvals. Littleton Coin Company, Littleton 54, N. H.

RAREST CC mint dollar 1885 Uncirculated $5.00. Coin Catalogue 25¢. Shultz, Salt Lake City 10, Utah.

BARGAIN LISTS of U. S. coins, Indianhead cent 10¢. Economy Sales Company, Mansfield 3, Mass.

SIXTEEN PAGE price list of USA and Canadian coins free. Selling prices on thousands of coins and supply items. Bryson, Inc., 612C White, Toledo 5, Ohio.

32 PAGE DELUXE U. S. coin list 10¢. Stoney, 260 Washington St., Boston 8M, Mass.

ILLUSTRATED RETAIL foreign coin catalogues. Gold coins. 800 Different. Price 50¢. Silver, copper coins. 3000 Different. Price 50¢. James Randall, Box 2205G, Ft. Lauderdale, Fla.

INDIAN CENT plus Bargain Lists 10¢. Hutchinson's, Box 4747, Philadelphia 34, Penna.

### • • • OLD STAMPS WANTED

I WILL Pay $100.00 each for 1924 1c green Franklin stamps, rotary perforated eleven (up to $1,000.00 each unused). Send 20c for large illustrated folders showing Amazing prices paid for old stamps and coins. Baker-Stamps, 203-MI-19, Oradell, N. J.

### • • • OLD COINS WANTED

WANTED—1822—$5.00 GOLD pay $10,000.00. 1913 Liberty Head Nickel $4,000.00. 1894-S Dime $2,000.00. 1876-C. C.—20¢ Piece $2,000.00. 1901-S—Quarter $75.00-$600.00. 1922—50¢-$5.00-$75.00. 1928 Hawaiian 50¢—$95.00. 1885 Trade Dollar $1,500.00. Uncirculated Dollars 1804 to 1839, 1893-S, 1895-P, 1903-O—$100.00-$5,000.00. Certain Dates—Lincoln Cents—$125.00; Flying Eagle Cents—$500.00; Indian Cents—$175.00; Halfcents—$900.00; 2¢ Pieces—$125.00; 3¢ Pieces—$150.00; Halfdimes—$1,500.00; Dimes before 1943—$500.00; Quarters before 1924—$1,500.00; Half Dollars before 1905—$3,000.00. Hundreds of others worth $10.00-$1,000.00. Canadian Coins, 1921—5¢ Silver—$100.00. 1889-Dimes — $100.00. 1875 Quarters — $100.00. 1921-50¢—$750.00. Wanted—Large Cents, Gold Coins, Paper Money, etc. Know their true value. Purchase Our Large Illustrated Guarantee Buying-Selling Catalogue giving complete allcoin information before sending coins to sell, price $1.00. Catalogue dollar refunded, $20.00 sale. Thousands of persons have sold us coins. Incorporated 1938. Worthycoin Corporation (K-203-C), Boston 8, Mass.

$100.00 FOR CERTAIN Indianheads; Lincoln pennies $75.00. We buy all rare coins. Booklet listing prices, 25¢. Lincoln Coins, D-207, Glendale, Ariz.

### • • • HOBBIES & COLLECTIONS

SAMPLE NAZI Medal with Ribbon, 50¢; Swastika Embroidered Emblem, 25¢; Catalog, 25¢. Hobbies, Box 71D-Rockaway Park 94, N. Y.

WE SELL Sea Shells. 15 assorted, $1.10. Andex Shells, P. O. Box 607, Sarasota, Fla.

### • • • INDIAN CURIOS, RELICS, ANTIQUES

2 WAR ARROWHEADS, Scalping Knife, Thunderbird, $4.00. Catalog 10¢. Arrowhead, Glenwood, Ark.

### • • • EDUCATION & INSTRUCTION

LEARN ARC, Gas, Heliarc Welding spare time at home. Big pay trade. Easy practical training covers Metallurgy, latest techniques, short cuts, metal repairs, etc. Free booklet. Write Utilities Engineering Institute, Dept. WJ-10, 2523 Sheffield, Chicago 14.

PHYSICAL THERAPY and massage pays big profits. Learn at home. Free catalogue. National Institute, Desk 2, 159 E. Ontario, Chicago, Ill.

HIGH SCHOOL—No Classes. Study at home. Spare Time. Diploma awarded. Write for Free Catalog HAJ-81, Wayne School, 2527 Sheffield, Chicago 14, Ill.

LEARN WHILE Asleep! Exciting details free. Research Association, Box 24-MM, Olympia, Wash.

WANT A Diesel job? New opportunities to increase income. Higher pay. More money. We can help you qualify. Tools. Shop method home training. Write today! Diesel Tractor, Heavy Equipment Division, Interstate Training Service, Dept. B-4, Portland 13, Ore.

LEARN APPLIANCE service and repair. Motors, washers, refrigeration, cleaners, everything. Free booklet. Appliance, 11027 South Vermont, Los Angeles 44.

COMPLETE YOUR High School at home in spare time with 62-year-old school. Texts furnished. No classes. Diploma. Information booklet free. American School, Dept. X128, Drexel at 58th, Chicago 37, Ill.

BOOKKEEPERS! INCREASE your earnings! Operate your own simplified "Dollar-A-Week" Bookkeeping and Tax Service. Full or spare time. Details Free. No obligation. Ellis, Box 202, Cedar Grove, N. C.

PIANO TUNING Pays. Big money in spare time. Learn at home in 30 days. No musical knowledge necessary. Phonograph, records, tools and instructions furnished. Personal instructions available. Free catalog. Capital Tuning School, 3160 S.W. 16th Court, Ft. Lauderdale, Fla.

ELECTRONICS INDUSTRY needs men now. Good pay. Home training offered by not-for-profit organization. Experience unnecessary. Information free. Write ATS-C17, 850 E. 58th, Chicago.

BOOKS, FREE general catalog, 100 pages. Text, vocational, educational, instructional subjects. Millions of volumes, new and used. Bargain prices. Books bought. Est. 1902. Long's College Book Co., Dept. MI, Columbus 1, Ohio.

OPERATE COLLECTION Agency. "Gold Mine" opportunity. Lifetime business. Be respected. Franklin Credit, Roanoke, Va.

LEARN MATHEMATICS At Home. Technical Training Service, Box 146, Bath Beach, Brooklyn 14, N. Y.

SPEAK, SING with power. Self-Training Records. Canfield, 2018-E Fifth Avenue South, Minneapolis 4, Minn.

1959 INDUSTRY TRAINING. Home-Study. Drafting, Design, Electronics. Aero Tech, 2166 Sunset Blvd., Los Angeles 26, Calif.

BIBLE COURSES—Degrees. Homestudy. Midwestern Bible School, 1060 Broadripple, Indianapolis.

USED CORRESPONDENCE Courses and Books sold and rented. Money back guarantee. Catalog free. (Courses Bought). Lee Mountain, Pisgah, Ala.

ENGINEERING DEGREES Earned through Home Study. Electronics, Electrical, Mechanical, Civil, Physics. When writing, specify course desired. Pacific International College of Arts and Sciences primarily a correspondence school. Resident classes also carried. 5719-F Santa Monica Blvd., Hollywood 38, Calif.

HIGH SCHOOL Diploma at home. Licensed teachers. Approved materials. Southern States Academy, Station E-13, Atlanta, Ga.

LEARN BLUEPRINT Reading at home. Insure your job—Higher Income and advancement. Madison Technical School, 118 Marlham Drive, Dept. MI, Madison 5, Wisc.

EARN COLLEGE degrees correspondence $100; 111 Mapes Avenue, Newark 12, N. J.

LEARN MINERALOGY and Lapidary art at home. Diploma course. Earn Big Profits making costume jewelry. Free catalog. Mineral Science Institute, Desk 17, 159 East Ontario, Chicago 11.

MASTER WATCHMAKING at home. Free sample lesson. Chicago School, 2328-TN Milwaukee, Chicago 47.

### • • • BOOKS, PERIODICALS

BOOKHUNTERS! All Subjects. Send Wants! Jaher Book Service, 183-M Hazelwood Drive, Westbury, N. Y.

FREE CATALOG! 1001 subjects! Treasure-Site Book Company, 6990 Aberdeen, Upper Darby, Penna.

### • • • RADIO, TELEVISION, HI-FI SUPPLIES & INSTRUCTION

WHOLESALE PRICES transistor supplies, Stereo, Hi-Fi amplifiers, changers, speakers, Eico kits, tubes. Schaak Electronics, 3867 Minnehaha Ave., Minneapolis 6, Minn. PA 9-8382.

RADIO COURSE only $22.95. Includes all tubes, parts, tools, instructions. Write for full information. Progressive "Edu-Kits" Inc., Dept. 560F, 1186 Broadway, Hewlett, N. Y.

PHONOGRAPH RECORDS cheap, postpaid. Catalogue. Paramount, Box 242-J, Williamsport, Penna.

CRYSTAL RADIO Experimenters. Write to Hulet, 303 Hope, Lakewood, N. J.

### • • • ACCIDENT INVESTIGATOR TRAINING

INVESTIGATE ACCIDENTS—Earn $750 to $1,000 monthly. Thousands of airlines, insurance companies, steamship lines urgently need Accident Investigators. Make excellent full time or spare time income. Free Book! No obligation. GI Approved. Write: Universal Schools, V-1, Box 8202, Dallas 5, Texas.

### • • • MUSICAL INSTRUCTION

SONGS INTO $$$$$$$$$$$$—Share $33 million dollars yearly for New Songwriters, songpoets. Any subject, songs composed, published, promoted by largest firm. Information, appraisal Free. Send Nordyke Music Publishers, 6800 Sunset, Hollywood 28M, Calif.

POEMS WANTED for musical setting and recording. Send poems. Free examination. Crown Music Company, 49-M West 32 Street, New York 1.

SONGPOEMS AND lyrics wanted. Mail to: TinPan Alley, Inc., 1650 Broadway, New York 19, N. Y.

SONGWRITERS: RECORDING company wants new songs. Royalty basis. National sales, promotion if selected. No charge for melodies. Send material. Music Makers, Dept. B-46, Box 2507, Hollywood, Calif.

POEMS WANTED for musical setting and recording by America's Largest Song Studio. Send poems. Free examination. Five Star Music Masters, 629 Beacon Building, Boston.

SONGWRITERS — OUTSTANDING, ethical offer. Hibbeler, C-32, 6808 Oleander, Chicago 31, Ill.

### • • • MUSICAL INSTRUMENTS

VIOLINMAKERS, REPAIRERS. Fine tone wood, and all violin supplies. Send for free wholesale new price list. International Sales, 414-MI E. Baltimore St., Baltimore 2, Md.

ACCORDIONS—SAVE up to 75%. Home trial. Trades accepted. Free catalog. Accordion Warehouse, Box MX, 2003 Chicago, Chicago 22.

1958 ACCORDIONS WHOLESALE—10 day trial. Free catalog. American Accordion Center, Dept. MI-19, 5329 Belmont, Chicago.

### • • • AUTHOR SERVICE

WANTED: BOOK MANUSCRIPTS—all subjects considered. Greenwich Book Pub. (Atten. Mr. Zorn.) 489 Fifth Ave., N. Y. C.

### • • • CARTOONING

CARTOON YOUR way to success! Internationally known instructor, Raye Burns, will personally teach you to create original, salable cartoons at home. Cost of Course is very low. Write for free details. Raye Burns School, Box 3583-M, Cleveland 18, Ohio.

"HOW TO Make Money With Simple Cartoons"—A book everyone who likes to draw should have. It is free; no obligation. Simply address Cartoonists' Exchange, Dept. 351, Pleasant Hill, Ohio.

### • • • ARTIST SUPPLIES & INSTRUCTION

LEARN SIGN Painting at home. Free talent test. Ben Kerns, Box 812-M, Greenville, S. C.

### • • • HYPNOTISM

HYPNOTIZE SUCCESSFULLY! Learn Easy, Fast, Modern Methods. Complete, Illustrated Course, including self-hypnosis and "Secret Nerve Pressure Technique" (Guaranteed Harmless)—$1.00. H. Fowler, 851 Draper Ave., Schenectady 6, New York.

FREE ILLUSTRATED Hypnotism, Self-hypnosis catalogue. Write: Hypnotist, 6721 Sunset Blvd., Hollywood 46M, Calif.

"SELF-HYPNOSIS, LIMB-BY-LIMB Self-Trance Induction Technique." $2. Hypnomaster, 846-S9 Sunnyside, Chicago 40.

### • • • MAGIC TRICKS, JOKES, PUZZLES

3000 TRICKS, POCKET, parlor, stage. World's Finest Magic Catalog (400 pages), $2.50. Kanter's, R-1311 Walnut, Philadelphia 7.

WORLD'S FINEST professional magic. Joker novelties. Giant illustrated catalog 10¢. Top Hat, Evanston 14, Ill.

FASTEST SERVICE to magicians for over 30 years. Send 10¢ for Douglas famous Catalog, 500 Tricks, containing magic for pocket, parlor, stage, with balls, coins, cards, cigarettes, ropes, silks, apparatus. Douglas Magicland, Dept. 30, Dallas, Texas.

FREE! FREE! Big Illustrated Catalog—Magic — Stage Illusions — Sensational Escapes—Jokes—Write: Great Heaney, Oshkosh, Wisc.

3100 NOVELTIES, JOKES, tricks, gadgets, funmakers, hobbies. Big catalog 10c. Johnson-Smith, D-492, Detroit 7.

### • • • CHALK TALKS

TRICK CHALK Stunts. Catalog 10c. Cartoonist John Balda, Oshkosh, Wis.

### • • • GAMES, ENTERTAINMENTS, AMUSEMENTS

"FUN FOR Youngsters. Amazing liquid transfers comic pictures to paper, cloth." $1.00. Pictran, 76 School St., Buffalo 13, N. Y.

### • • • DETECTIVES

DETECTIVES—WORK home-travel. Experience unnecessary. Detective Particulars free. Write, George Wagoner, J-125 West 86th, New York 24.

PROFESSIONAL INVESTIGATORS Training School. Badge, diploma, future. Box 41197, Los Angeles 41, Calif.

BE A Detective. Write for free details. State age. National Detective Academy, Box 1082, Scottsdale, Ariz.

DETECTIVE TRAINING. Phillips Secret Service System, 1917-G North Kenneth, Chicago 39, Ill.

### • • • TATTOOING

LEARN PROFITABLE, fascinating Tattooing. Illustrated information $1. Zeis, 728-I Leslie, Rockford, Ill.

### • • • CAMERAS & PHOTO SUPPLIES

OIL COLORING Photographs—A fascinating hobby or profitable sideline for those with artistic talent. Learn at home. Easy simplified method. Free booklet. National Photo Coloring School, 835 Diversey Parkway, Dept. 2041, Chicago 14.

FREE PHOTOGRAPHIC Bargain Book. Thousands of bargains in photographic equipment and supplies. Write: Dept. 3-D3, Central Camera Company, 230 S. Wabash Ave., Chicago 4, Ill.

BROWNIE MOVIE Camera $19.95, Norelco Men's Shaver $12.95. Tremendous discounts, photo equipment, appliances, Free Catalog. Mailers Mart, Pelham 3, N. Y.

PHOTOGRAPHY FOR Pleasure or profit. Learn at home. Practical basic training. Long established school. Free booklet. American School of Photography, 835 Diversey Parkway, Dept. 2041, Chicago 14, Ill.

### • • • MOTION PICTURES & SOUND EQUIPMENT

FREE! BLACKHAWK'S big sale catalog 8mm., 16mm. movies, 2"x2" color slides. Biggest selection anywhere! Projectors, cameras, supplies—big discounts! Get free, every three weeks, 12-page newspaper size bargain list! Blackhawk Films, Davenport 16, Iowa.

RECORDERS, HI-FI. Free Wholesale Catalogue. Carston, 215-V East 88, N.Y.C. 28.

TAPE RECORDERS, HI-FI components, tapes. Unusual values. Free Catalog. Dressner, 69-02-L, 174 Street, Flushing 65, N. Y.

5,000 8-16MM. SILENT-SOUND Films. Photographic equipment. International, Greenvale, N. Y.

### • • • HOME MOVIES

SENSATIONAL OFFER. 8mm 50 Ft. Movies—Reg. $1.95 Only $1.00. Comedies, Cartoons, Animals, Airplanes. Send $1.00. Home Movies, Box 10-B, Van Nuys, Calif.

FREE CATALOG. Save $$$. Fresh 8mm, 16mm B&W and color film. Home processing equipment. Superior Bulk Film Company, 442-446 No. Wells, Chicago 10.

SAVE 50%! GUARANTEED-FRESH color, b&w movie film! 8mm, 16mm. Free catalog! ESO-L, 47th Holly, Kansas City 12, Mo.

### • • • AUTOMOBILES & MIDGET CARS

NON-PROFIT ORGANIZATION offers automobile catalogs—old, modern and foreign; dealer books, glossy photographs, service manuals; free motor magazines. Write to get on free mailing list. Auto Maniacs 2, Stockbridge, Mich.

FIBERGLAS SPORTS Bodies — Bolts on your chassis. $295. Free Literature. Almquist Engineering, Milford MI2, Penna.

MIDGET CAR, plans and price list of parts, 35c. M. Sypher Co., Station F, Toledo, Ohio.

WORLDWIDE OLD Car Club Literature Free. Send stamp Worldwide Car Club, Dept. C, Box 20749, Los Angeles 6, Calif.

NEW 1959 AUTOMOBILES—to 25% off retail. Delivered anywhere. Meder, 550-MI Fifth Avenue, New York 36.

LEARN HOW To Buy A Good Used Car. Send $1 to Book, 4613 Olive, Racine, Wisc.

### • • • AUTO SUPPLIES & EQUIPMENT

1959 GIANT AUTO Parts Catalog. Thousands Accessories Stores Don't Handle . . . Gadgets, Custom Equipment. Send 25¢ (Refundable). Newhouse Automotive Industries, 5806 MI-1 Beverly, Los Angeles 22, Calif.

FREE! NEW Catalog—Speed, Power, Mileage Increasing Equipment. Discounts! Almquist Engineering, Milford MI5, Penna.

"GAS SAVER" free trial. If satisfied, $1.75 each. Neher, La Verne, Calif.

ENGINES. 1956-1958 OHV V8's. Most popular makes. Free details. Ledbetter Enterprises, 1015 West 17th, Texarkana 2, Texas.

AMAZING, NEW, car wash, cleaner & shine without washing, in Minutes $1.00 Pint. P. O. Box 1091, Fresno, Calif.

RING-VALVE JOB while driving, $6.00. Literature. Motaloy, Grantham 2, Penna.

### • • • MOTORCYCLES, BICYCLES MOTOR SCOOTERS

RECONDITIONED MOTORCYCLES and motors. Chromium accessories. Complete stock Indian parts. Expert rebuilding. Fast service. Indian Motorcycle Sales, Kansas City 27, Mo.

# MI Classified Advertisements

WHIZZER ENGINE $7. Motorbike conversion $4. Cushman motorscooter $15. Boys auto $35. Highway Midget $40. Crosley Station Wagon $75. (Mailorder only.) Send 25c (35c for first class mailing) for new 32 page Directory-Catalogue Number 87, listing these and hundreds of other bargains in motorscooters, midget cars, engines, homebuilders parts, plans, etc. Midget Motors Directory, Athens, Ohio.

WORLDWIDE MOTORCYCLE Club Literature Free. Send stamp Worldwide Motorcycle Club, Dept. C, Box 20749, Los Angeles 6, Calif.

### • • • AVIATION

PROPELLERS, PLANS, supplies for airboats and snowplanes. Catalog 25¢. Banks-Maxwell, Box 3301D, Ft. Worth 5, Texas.

BOOKS, AVIATION. Free catalog. Aero Publishers, 2162-M11 Sunset, Los Angeles 26, Calif.

### • • • JET PROPULSION & ROCKETS

ROCKETS AND solid Propellents. Easily made. Complete instructions. $1.00. Rocket-Craft, P.O. Box 13, Pottsville, Penna.

### • • • ENGINES, MOTORS

DIESEL INJECTOR parts wanted. GM51-71-110. Packard, 7120 Carnegie, Cleveland 3, Ohio.

### • • • ELECTRICITY & ELECTRICAL SUPPLIES

APPLIANCE PARTS Wholesale. Catalogue 25¢. Sielco, 26 South 20 Street, Birmingham 3, Ala.

### • • • MACHINERY, TOOLS & SUPPLIES

"MACHINE TOOL Reconditioning & the Art of Hand Scrapping"—Illustrated manual for machinists. Third printing. Free circular. Machine Tool Publications, 215-M Commerce Building, St. Paul 1, Minn.

PIPEFITTERS—PREFECTED "Dial" calculator consisting of instant calculations of cut back of miter, saddle, "y" cuts on pipe sizes from 2" to 48". Guaranteed accurate. Price $3.00. Dial-A-Cut, P. O. Box 1532, Savannah, Ga.

SHARPEN CHAIN Saws. Two models, $15.40, $18.60. Precision filing easy. S&M Manufacturing Co., Sidney, Iowa.

ELECTRIC PENCIL: Engraves all Metals, $2.00. Beyer Mfg., 10511-G Springfield, Chicago 43.

### • • • WELDING, PLATING & SOLDERING

FREE CATALOG, welders, welding kits. Build 300-ampere welder using aircraft generator, plans 25¢. Agents wanted. Dunbar Manufacturing, Minneapolis 8, Minn.

WELDERS, 110/220, WELDS 1/2", $39.50. Morris, 1070 Inner Drive, Schenectady 3, N. Y.

### • • • INVENTIONS WANTED

INVENTORS: HUNDREDS of manufacturers have requested our assistance in locating marketable new products. Complete information, free. Institute of American Inventors, Dept. 50 C, 635 F Street N. W., Washington 4, D. C.

INVENTIONS WANTED. All types. Tremendous manufacturers lists. Global Marketing Service, 2420 77th, Oakland 5, Calif.

INVENTORS—DON'T sell your invention until you receive our offer. Write Cowgill, Box 298, Marion, Ohio.

INVENTORS . . . TURN your talents into immediate cash! Join Inventors of America. Write National Headquarters, 3136-C Sylvania Avenue, Toledo 13, Ohio.

IF YOUR invention is adaptable to promoting we will contract for selling on cash or royalty. Free booklet outlines royalty rates, requirements. Kessler Corporation, 61-IW, Fremont, Ohio.

ARE YOU interested in offers from reliable manufacturers for your inventions and ideas? Harvey Consultants, Cambridge, Md.

INVENTIONS BOUGHT and sold. Write "your I.D.E.A., Incorporated," Box 8627, Oklahoma City, Okla. Bonded and licensed.

INVENTIONS WANTED: "Patented"—"Patent Pending." 28 years experience Promoting Inventions. National Service Bureau, 3126 Meramec, St. Louis 18, Mo.

INVENTIONS WANTED Now by my manufacturer-clients. Write Adams, Invention Broker, 80-N Wall Street, Financial District, New York City.

MANUFACTURERS WANTING new inventions, royalty basis. Brown, 141-M, Broadway, New York City.

### • • • FOR INVENTORS

INVENTORS: LEARN how you can protect your invention. A specially prepared booklet "Patent Guide for the Inventor" containing detailed information concerning patent protection and procedure together with "Record of Invention" form will be promptly forwarded to you upon request—without obligation. We are registered to practice before the United States Patent Office and are prepared to serve you in the handling of your patent matters. Clarence A. O'Brien & Harvey Jacobson, Registered Patent Attorneys, 93A-A District National Building, Washington, D. C.

INVENTORS—SEND for free patent information book and inventor's record. Registered Patent Attorney, Associate Examiner, Patent Office 1922-29; Patent Attorney & Advisor, Navy Department 1930-47. Gustave Miller, 19M11 Warner Building, Washington 4, D. C.

INVENTION RECORD form free and "Patent Information Every Inventor Should Have." Carl Miller, Registered Patent Attorney, Woolworth Building, New York.

INVENTORS: NEED Help? Write Institute of American Inventors, Dept. 50T, 635 F St., N. W., Washington 4, D. C.

INVENTORS—IF you believe you have an invention, you should find out how to protect it. The firm of McMorrow, Berman & Davidson with offices in Washington, D. C., is qualified to take the necessary steps for you. Send for copy of our Patent Booklet "How to Protect Your Invention." We will also send you an "Invention Record" form. No obligation. They are yours for the asking. McMorrow, Berman & Davidson, Registered Patent Attorneys, 138-R Victor Building, Washington 1, D. C.

INVENTIONS WANTED Now by my manufacturer-clients. Write Adams, Invention Broker, 80-H Wall Street, Financial District, New York City.

"INVENTOR'S GUIDE" sent free. Frank M. Ledermann, 154 Nassau Street, New York 38, N. Y.

INVENTORS—THIS firm is registered to practice before the United States Patent Office and available to assist you in the preparation and prosecution of your patent application. "Patent Protection for Inventors" booklet containing detailed information and steps to take toward patent protection sent promptly upon request. No obligation. Victor J. Evans & Co., 570-A Merlin Building, Washington 6, D. C.

INVENTORS—DON'T sell your invention until you receive our offer. Write Cowgill, Box 298, Marion, Ohio.

INVENTIONS PAY inventors when designed for profitable sales and effective patent control. I secure valuable patents at low definite fees; 30 years experience. Searches $15. Joseph O'Brien, Patent Development Engineer, 132 Nassau Street, New York 38, N. Y.

HIGHEST PROFITS paid. New inventions wanted. Brown, 141-N, Broadway, New York City.

### • • • PATENTS FOR SALE

PATENTED AUTOMATIC Fish Feeder. Sale outright or royalties. E. Roben, 8 Harvey Avenue, Paramus, N. J. Manual 1957 Issue M.I.

### • • • PATENT ATTORNEYS

INVENTORS—IF you believe you have an invention, you should find out how to protect it. The firm of McMorrow, Berman & Davidson with offices in Washington, D. C., is qualified to take the necessary steps for you. Send for copy of our Patent Booklet "How to Protect Your Invention." We will also send you an "Invention Record" form. No obligation. They are yours for the asking. McMorrow, Berman & Davidson, Registered Patent Attorneys, 138-S Victor Building, Washington 1, D. C.

"INVENTOR'S GUIDE" and "Record of Invention" free on request. Frank M. Ledermann, 154 Nassau Street, New York City.

INVENTORS—TAKE these preliminary steps toward patent protection. Sketch and describe your invention. Sign, date and have this disclosure witnessed by two people who understand your invention. Have us make a preliminary search among U.S. patents already granted for similar types of invention. We report on the probable patentability of your invention and recommend your further course of action. Write for our instructive booklet, "Patent Protection for Inventors" and convenient "Evidence of Invention" disclosure form. Victor J. Evans & Co., 571-A Merlin Building, Washington 6, D. C.

INVENTORS: LEARN how to protect your invention. Unless the inventor is familiar with patent matters, he should engage a competent registered patent attorney or agent to represent him. We are registered to practice before the U.S. Patent Office and prepared to serve you in handling your patent matters. "Patent Guide for the Inventor" containing detailed information concerning patent protection and procedure with "Record of Invention" form will be forwarded to you upon request—without obligation. Clarence A. O'Brien & Harvey Jacobson, Registered Patent Attorneys, 938-A District National Building, Washington, D. C.

C. A. SNOW & CO., 1-427 Snow Bldg., Washington 1, D. C. Registered patent attorneys. Literature mailed on request.

INVENTORS: INFORMATION on patent procedure furnished on request, without obligation. John Randolph, Registered Patent Attorney, 810 Victor Building, Washington 1, D. C.

INVENTION RECORD form free and "Patent Information Every Inventor Should Have." Carl Miller, Registered Patent Attorney, Woolworth Building, New York.

### • • • BUILD IT YOURSELF

BUILD YOUR own Concrete Blockmaker. Easy Inexpensive. Motor or hand operated. Write: Clyde Lee, Dept. M, Mountain View, Okla.

### • • • FOR THE HOME

FOAM RUBBER Furniture Cushions—Factory seconds 50% discount. Free catalogue. Perma-Foam, 390-B Nye Avenue, Irvington, N. J.

### • • • HOME CRAFTSMEN

NEW BIG illustrated catalog. Supplies for Leathercraft, Metalcraft and numerous small inexpensive crafts. Prompt shipments. Top values. Latest ideas. Send 10¢ today to J. C. Larson Co., Dept. 8317, 820 S. Tripp, Chicago 24.

BUY PICTURE Frame moldings at wholesale. Actually less than cost of raw lumber. All styles and widths. Free Delivery. Write for price list. Chesapeake Picture Frame Makers, Box 533, Baltimore 3, Md.

WOODWORKING AND Cabinetmaking course for beginning and advanced home craftsmen. Only complete low-cost home training program available. Write for free booklet. Interstate Training Service, Dept. G-4, Portland 13, Ore.

FREE LEATHERCRAFT Catalog. Quality Kits, Leathers, Tools. Handicrafters, Box 427, Montrose, Calif.

2430 ARTIST-DRAWN patterns, new catalog 10¢. Craftplans, 1322-K, Wabash, Chicago 5.

8 PIECE FURNITURE Touch Up Kit $1.95 post paid. Hollyer, 82 Brigham Rd., Worcester 9, Mass.

KNOCKDOWN CEDAR chests, also over fifty kits. Catalog 25¢. Giles-Kendall Co., Huntsville 1, Ala.

101 PATTERNS OF smart Gifts, Novelties, Shelves, Action windmills plus "Make Money Jig Sawing." $1.00. Mastercraft, 15X, 7041 Olcott, Chicago 31.

AMAZING NEW idea, original. Natural wood brick. Planters, room dividers. Make with waste lumber. Detailed plans $1.00. Holiday House 7225, 4th Plain, Vancouver, Wash.

BUILD "FLEXI-TRAILER"—Anyone can do it easy! Use as box, flat, boat, or camping trailer—converts in one minute! Complete plans $4.95. Write for details. Outdoor Industries, Dept. MI-1, R. 4, Excelsior, Minn.

MAKE SOLID Wooden Chains fast and easy with coping or jig saw, no carving. Secret plans $1.00. Stombock, Farmville, Va.

LEARN ART Metalcraft and jewelry making. Complete, inexpensive, home training course now available. Special tools and materials furnished. Write for free booklet. Interstate Training Service, Dept. L-4, Portland 13, Ore.

BEAUTIFUL KNOCKDOWN Cedar Chests. Free price list. Bedford Lumber Company, Shelbyville, Tenn.

HOUSEHOLD PLUMBING Facts—Illustrated Booklet. Save Money. Cut Plumbing Costs. Information to Benefit You. Mail $1.00 Lee Woodrow, Box 92, Cabanne Station, St. Louis 12, Mo.

ELEVEN PIECE Nativity Scene $2.25, Santa Sleigh Reindeer 56x80, Santa Pack $2.25. Strother, Belington 3, W. Va.

### • • • MODELS & MODEL SUPPLIES

SCALE MODEL Materials for building model homes and architectural buildings of any type, ¼" and ⅛" scale. Send 25¢ for catalog. A & B Model Builders, Dept. M, 454 Donovan Road, Kansas City, Kans.

LIONEL TRAINS Big Discounts. Bulletin Free. Catalog 25¢. Mack Bros., 2041M Chicago Ave., Chicago 22.

BALSA WOOD, Model Aircraft. 40 page catalog, 25¢. Sig Co., Montezuma, Iowa.

### • • • PLASTICS

NEW DO-IT-YOURSELF casting & molding Plastics! No Experience or Machinery Necessary. Send 25¢ for Big 64 page Catalog listing Hunderds of materials, molds, complete outfits & accessories. Castacraft Corp., Dept. A-32, P. O. Box 555, Palo Alto, Calif.

NEW LIQUID casting plastic, clear, colors. Embed real flowers, butterflies, photos, coins. Send 25¢ for two handbooks "How to Cast Liquid Plastics" and "How to Make Extra Money at Home." Castolite, Dept. A-104, Woodstock, Ill.

LEARN PLASTICS Fabrication for spare time income. Low cost home training now available. Write for free booklet. Interstate Training Service, Dept. D-4, Portland 13, Ore.

### • • • FOR SPORTSMEN

FISHERMEN, AMAZING new artificial lure. Guaranteed to catch them for you or return for money back. Only $1. Morton, Dept. 1161, 5880 Hollywood Blvd., Hollywood 28, Calif.

GLACIER PARK fishing and visitors guide, '59 edition self guiding manual. Lots pictures $2 ppd. Charles Green, Coram, Mont.

POLAROID SKIING, Driving, Flying, Goggles Government Surplus Unissued, Leather, Folding Type, $1.00 ea. Connelly, Box 7, Wyckoff, N. J.

SAMPLE: 25¢ COPY of "The Archers' Magazine." Send 10¢: 1200 Walnut Street, Philadelphia 7, Penna.

### • • • SPORTING GOODS

5,000 BARGAINS, FIREARMS, binoculars, war relics. Catalog 50c. Smith Armory, Runnemede, N. J.

JAP ALTERING to American shells $6.00. Jap shells $3.75. Catalogue 10¢, T P Shop, West Branch 7, Mich.

### • • • BOATS, OUTBOARD MOTORS

BOAT LEAKING? Make it dry. Fiberglas covering kits, molding supplies. Aqua Glas, Box 99, Altadena, Calif.

FREE CATALOG! Boat Kits, Trailers, Fiberglas, Marine Hardware. Luger Industries. Dept. P-1, 9200 Access Road, Minneapolis 20, Minnesota.

BOAT PLANS—Full Size Patterns—Frame Kits. Modern Inboards and Outboards for amateur builders. Complete New Catalog 50¢ or specify requirements. Designs, 9152 Rosecrans, Bellflower, Calif.

MARINE CONVERSIONS. Ford, Chevrolet V8, Jeep engines. Catalog 25¢. Lehman Manufacturing Company, 972C Broad Street, Newark 2, N. J.

NEW, USED, rebuilt marine motors. Marine conversions, fittings. Free catalog. Stokes Marine Supply, Dept. 21, Coldwater, Mich.

### • • • BINOCULARS, TELESCOPES, MICROSCOPES

REFLECTOR AND Refractor Telescopes ready for immediate use, from $3.98 to $475, and all necessary parts to construct your own reflector scopes. Mirrors, eyepieces, Tripods, all other accessories. Also complete line Binoculars, microscopes. Send for free illustrated literature, Criterion Manufacturing Co. maker of famous "Dynascope" Reflector Telescope, Dept. DM 65; 331 Church St., Hartford, Conn.

TRIPOD PLANS. Unless you have a sturdy support for your telescope it will be virtually useless for good observing. For best results build MI's "Quarter-Ton" Tripod. Send 75c for plans and instructions to MI Reader Plan Service, Fawcett Place, Greenwich, Conn. Please ask for Plan No. P-7.

"FREE" CATALOGUE! Thousand war surplus optical bargains. Lenses, Prisms, Telescopes, Binoculars, etc. Send $1.00 for 10 lens Hobbyist Set and Project booklet. R. Jaegers, 691 West Merrick Road, Lynbrook, N. Y.

REFLECTING TELESCOPES, 60X completely assembled $29.75. Guaranteed observatory clearness. Free information. Skyscope, P.O. Box 55, Brooklyn 28, New York.

WAR SURPLUS Bargains: Millions of lenses, instruments, telescopes, binoculars, components and complete line of astronomical telescope items. World's greatest optical market-place! Send only $1.00 for beginner's 10-lens Kit and big instruction booklet Stock 2-CB. Write for Catalog CB Free! Edmund Scientific Co., Barrington, N. J.

TELESCOPES, BINOCULARS—all sizes. Complete optics, parts, accessories for telescopes. Free illustrated catalog. Suffolk Science, Mattituck, N. Y.

REFLECTOR TELESCOPES from Esco. Assembled and do-it-yourself telescopes from $7.50 (3") to $175 (12"). Complete line of optics and accessories. See display ad this issue. Send for free illustrated booklet. Esco Products, Oak Ridge, N. J.

AMAZING, NEW Telescope. Free Circular. Telescope Shop, 3562 Third, Detroit 1, Mich.

### • • • BODY BUILDING—ATHLETIC EQUIPMENT

KARATE KUNG-FU—Deadliest Oriental Defense—Manual. Home training develops power that can split planks, masonry bare-handed. $3.98. J. Yim Lee, 584 Valle Vista Ave., Oakland 10, Calif.

FREE MUSCLE building information. Bodytone, Box 638-C, North Miami, Fla.

# MI Classified Advertisements

### • • • PLANTS, SHRUBS & TREES

RAISE YOUR Shrubs, trees from seed. Free Planting guide, price list. Woodlot Seed Co., Norway 23, Mich.

### • • • REAL ESTATE, FARM LANDS

$10 DOWN, $10 MONTHLY buys your homesite in Central Florida's finest retirement and vacation community in the high ridge section near Sebring. On 84 square mile Highlands Lake. Free community parks and beaches. Get Free color brochures, house plans; learn how we help you plan, finance, build your low cost, tax-exempt home. Write Florida Realty Bureau, Inc., Dept. EI, Lake Placid, Fla.

FLORIDA—NICE homesites, $345 at $10 monthly. Folder Free. Winston Vernor, DeLand, Fla.

CANADIAN TAX Lands. Mining, Hunting, Fishing, and lake front sites. Invest in Canada's Minerals and Forests. Most properties less than $1 per acre. Monthly lists only $1. Mineral Club of Canada, S. W., Box 187, Windsor, Ontario.

ALASKA 49TH STATE, White, Real Estate Broker, Business Opportunities, Correspondence invited. Box 702, Juneau, Alaska.

### • • • HORSE TRAINING

"HOW TO Train Horses"—A book everyone who likes horses or ponies should have. Free. No obligation. Simply address Beery School of Horsemanship, Dept. 1151, Pleasant Hill, Ohio.

### • • • RABBITS—HAMSTERS

RAISE RABBITS on $500 month plan. Plenty markets. Free details. White's Rabbitry, Delaware, Ohio.

### • • • ANIMAL BREEDING

RAISE MINK: Free booklet, pen plans, inside "secrets," feed, care. Mink are money makers. Investigate today. Lawrence Molgard, Brigham City 15, Utah.

### • • • FARM EQUIPMENT

SENSATIONAL GARDEN Tractor. Hoes between plants and rows, including strawberries. Eliminates hand hoeing. Standard in size, yet entirely different. Patent 2742840. Also tills. Fantastic offer to first few inquiries. Auto Hoe, DePere 72, Wisc.

### • • • PERSONAL

BORROW $50 TO $600 By Mail. Quick, Easy, Private. No Co-Signers. Repay in 24 small monthly payments. For the amount you want write today to Dial Finance Co., 410 Kilpatrick Bldg., Dept. A-1, Omaha 2, Nebr.

BORROW BY Mail. $100-$600. Anywhere. Air Mail Service. Postal Finance, 200 Keeline Building, Dept. 918A, Omaha 2, Nebr.

"YOU CAN Find Out!" Confidential information developed, any matter, person, anywhere. Officially licensed. Established 1922. Equitable Service Bureau, 15 Maiden Lane, New York.

GAIN SELF Confidence, Memory Power, Magnetic Personality by recordings. Invisible Psychologist, Box 24-MM, Olympia, Wash.

ARABIAN DISTANT instant hypnotism, complete, 5. BM/HGYL, London, W.C.1., England.

SAVE 50% ON Vitamins. New, free catalogue lists all brands, formulas, prices. Compare and save. State vitamins now using. Vitamin Specialties, Box 4435-C, Philadelphia 40, Penna.

LEGAL FORM for making a will, $1.00. Curtiss Folio Publications, 1412 Great Northern Bldg., Chicago 4, Ill.

"RULE OTHERS with thoughts." (Telepathy.) Details—stamp. Clarion, 846-S9 Sunnyside, Chicago 40.

MEXICAN LAW. Attorney Ceniceros, Apto 79.—C. Juárez, Chih., Méx.

### • • • JEWELRY

FREE CATALOG. Costume jewelry parts. Supplies. Reasonable prices. Fast service. Guaranteed quality. Unique merchandise. Folsom's, Box 52, Medford 55, Mass.

COSTUME JEWELRY settings, rhinestones, pearls. Rhinestone earring kit and catalog 50¢. Catalog 10¢. Hom-Art, MI Box 4035, Hammond, Ind.

COSTUME JEWELRY Supplies, Settings, Rhinestone, etc. 88 page illustrated catalog. 25¢. Milady, Box 1328, G.P.O., N.Y.C.

### • • • REMAIL SERVICE

ALASKA 49TH STATE, Soon. Re-Mails, 25¢. Alaska Statehood Stamp, First issue out January. White, Box 702, Juneau, Alaska.

CONFIDENTIAL REMAILS 25¢. $3.00 month. Marina, 1740 So. 91 St., Seattle 8, Wash.

FLORIDA REMAILS 25¢. Receiving-forwarding $3.00 month. Grimm, Box 1781, Tampa, Fla.

JERRY LOVE, 1419 E. 83 Street, Los Angeles 1, Calif., letters remailed 25¢ a letter.

SECRET MAIL Address. $3 Month. Hedgpeth, Box 830, Alhambra 17, Calif.

### • • • MISCELLANEOUS

"COBRA, DEFENSIVE street-fighting tricks." Designed to help peaceful adults. $2. Gaucho, 846-S9 Sunnyside, Chicago 40.

$1.00 BRINGS BEAUTIFUL surprise Xmas specials. Surprise, Box 201, Buffalo 12, N. Y.

HANDWRITING ANALYSIS. Traits. Potentials. $1.00. Send penned letter about yourself. LB, 24311 Charles, Mt. Clemens, Mich.

FREE WHOLESALE Catalogs! 250,000 Products . . . Tremendous Discounts. Econ-O-Mart, Whippany 8, N. J.

### • • • MINERALS, PRECIOUS STONES

FIND HIDDEN Treasures in your own backyard . . . spare time—weekends. Get Free information about sources, bargains, vital data from the jewelry industry's biggest suppliers. Write for Free Booklet: Grieger's, 1633 E. Walnut, Pasadena 94, Calif.

CUT GEMS, make jewelry. Learn easily for profit or fun. Beautiful 100 page magazine tells how; where to get supplies, fascinating! Sample 25¢ or request Free literature. Lapidary Journal, Dept. Mar 6, Calif.

MINERAL MAP of Canada. Showing complete mining areas of Gold, Uranium, Silver, Copper, etc. Over 1,000,000 sq. miles. Excellent for exploration and reference. Only $1 to Mineral Club of Canada, S. W., Box 187, Windsor, Ontario.

### • • • OLD GOLD WANTED

HIGHEST CASH For Old Gold, Broken Jewelry. Gold Teeth, Watches, Diamonds, Silverware, Spectacles, Platinum, Mercury. Free information. Rose Refinery, Heyworth Bldg., Chicago 2.

GOLD, SILVER platinum, diamonds, scrap jewelry, spectacles, watches wanted. Highest prices, free information. Wilmot's, 1067 Bridge St., Grand Rapids 4, Mich.

### • • • GIFTS TO GIVE

IMPORTED CAPESKIN travel slippers with matching leather travel case. Case will hold all his toiletries. Slippers are extra fine quality, butter-soft and light as a feather. Hose size (10-10½) (11-11½) (12-13) London tan. Handsomely gift boxed. Guaranteed to delight the most discriminating man just.....$10.95 Cash, check or m.o. The Aunt Sally Co., Dept. MI-A, 252 Rathbun St., Woonsocket 1, R. I.

### • • • WATCHES, WATCHMAKING, CLOCKS

WATCHMAKERS JOURNAL contains instructions on watch repairing. Sample copy 25¢. Dean Co., Peninsula Sta., Daytona Beach, Fla.

USED AND new watches $2 up. Free List. Southern Watches, 5-M South Wabash, Chicago 3, Ill.

WATCH AND clock repairing books. Free catalog. North American, 2320-CA Milwaukee, Chicago 47, Ill.


## "MAIL ORDER BUSINESS"

Big 8½ x 11" monthly publication, up to 36 pages jammed with illustrated authoritative articles, features on the mail order business. Let 10 Mail Order authorities show you the way to Mail Order success! 2 back issues $1.00. 5 months subscription $2.00. 1 year sub. $6.00. Money back if not pleased.

**MAIL ORDER BUSINESS, Box 591-EK, Lynn, Mass.**

NEW, NATURAL LIGHTWEIGHT
**DENTAL PLATE**

**MADE FROM YOUR OLD ONE**—New, Professional Method gives you natural-looking, perfect-fitting plastic plate—upper, lower or partial—from your old cracked or loose plate without an impression. CLINICAL method means fast service, huge savings. Try new plate full 30 days at our risk. New plates sent you Air Mail same day.

New Priced Low As $15.95

**SEND NO MONEY**—Just your name and address for full particulars FREE. No cost. No obligation. Act now.

**CLINICAL DENTAL LAB., 335 W. Madison St., Dept. T-101, Chicago 6, Ill.**

**A number of one-man mail order enterprises are paying their owners an income of $40,000 to $50,000.**

# SPECIAL OPPORTUNITIES

**Mail order is big business. Annual catalog sales volume of Sears, Roebuck and Co. is over 700 million dollars!**

## HOW TO START

# Your Own Mail Order Business

**You can make a fortune by mail. New firms will set you up in a fabulous mail order business of your own! They'll make up your catalogs, prepare your advertising, supply mailing lists and even ship your products for you!**

**By John Winkler**

WHEN Arthur Johnson decided to earn some extra cash during his spare time he chose the mail order business because it could be run right from his own home. He reasoned that it was one of the few fields still open in which you could start your own business with a minimum of capital. In fact, his total investment was less than $100.00.

*(Advertisement)*

**Witness the success of Arthur Johnson. He obtained a franchise from Mail Order Associates and within three months the profits started pouring in.**

What began as a spare time job mushroomed into a profitable full-time business.

How successful was Johnson? Well, he drives a Cadillac convertible, owns a home in Nevada and a summer place in Florida, with a Chris-Craft cruiser to boot!

No, Johnson didn't find Uranium or answer the $64,000 question. He simply cashed in on the fabulous mail order business—with the help of one of the new mail order organizations which back enterprising new comers to the mail order business.

Like so many other beginners in this field, Johnson was plagued with the problem of finding the 'ideal' mail order product. One that would have a large market, offer a good profit margin, bring repeat sales, and one which could be easily shipped by mail. After reading several books and courses on the subject, it seemed impossible. In order to obtain wholesale prices from manufacturers he had to purchase large quantities, which meant all his capital would be spent in inventory. The additional cost of sales letters and advertising and the risk of picking a poor mail order product and being stuck with all that merchandise made it even more obvious he'd have little chance of success.

Then he heard about Mail Order Associates of Maywood, New Jersey—an organization set up to aid the small mail order operator.

He wrote to M.O.A. for full information, sent in his application for a franchise and within three months the profits started pouring in.

Johnson attributes his success to the large selection of novel and unusual mail order products carried by M.O.A.

Mail Order Associates is one of the few new pioneers in the fabulous mail order business. One of the first organizations formed to put the small mail order operator in business—big business, they fill a definite need for the beginner with little capital. Here's what they offer you:

(1) Complete, ready-to-mail catalogs printed with your name and address . . . in any quantity you wish. Catalogs, sales letters or self mailers may be based on any of the following typical categories:

BABY GIFTS AND NOVELTIES
VITAMINS
INSTRUCTION BOOKLETS AND COURSES
COSMETICS

You select your own market.

(2) Profits range from 50% to 150% on most items. For example, you may sell a $20.00 mail order course and make $10.00 on each sale. Or you sell two appliances at a discount, give one away free and still make a 50% overall profit!

(3) Everything is drop-shipped for you. You have no merchandise to carry—no capital tied up in inventory. All merchandise is stocked and shipped for you by Mail Order Associates or the manufacturer. You forward orders and your own shipping labels to M.O.A. and all merchandise is sent direct to your customer—using YOUR OWN LABEL.

(4) Up to date mailing lists are made available to you. Lists of proven mail order buyers are compiled for the market you select. Records are kept so that no two distributors use the same names. All names are supplied on gummed labels—all you do is apply them to your catalogs.

(5) A consultation service is provided to answer any questions you may have. In addition, you're supplied with a list of leading national magazines that provide free editorial write-ups. You're even given form letters to use to obtain free advertising of your products from these magazines.

(6) Your choice of at least four new mail order programs during the year. One may be a catalog of baby items, another on household gadgets, etc. You may select one or as many as you can handle.

Here's how they operate: Unlike the individual mail order dealer who looks for the ideal product, M.O.A. searches the market first! After making surveys and tests to determine a profitable mail order market, they select the products to suit the market. For example, the market of selling baby items to new mothers is a big one. Over four million babies are born in the U. S. each year. This is the first step in selecting a mass market for their franchised dealers. Then comes the selection of products to suit this market. They contact every manufacturer of products sold to new mothers. From thousands of items offered by various companies, only those suit-

able for mail order are selected for preliminary tests. The final survey is made for new novelties and products not yet manufactured! If they feel certain ideas for new products have merit, they'll manufacture the items on a royalty basis and produce them for their dealers exclusively!

From this preliminary selection of new mail order products suited to this particular market, they make actual tests to see which items will sell and produce the greatest profit

**The thrill of receiving money in your morning mail is one you'll never tire of.**

for their franchised dealers. Having finally selected the best products they begin layout and artwork on a new mail order catalog for their dealers. The final catalog may consist of a small 6 x 9 brochure, a large 8½ x 11 illustrated booklet or even a small one page self-mailer, depending upon the market and selection of products. Sales letters are prepared by experienced copy writers, and the complete job—layout, copy and printing is done by experts to produce professional results.

By purchasing merchandise in large quantities and running catalogs on large presses, they are able to offer their dealers complete backing at a fraction of the cost the individual would have to pay for the same job.

The final step is to supply the franchised dealers with names of prospective customers! In this particular example, they would make available the names and addresses of over 7000 new mothers every day!

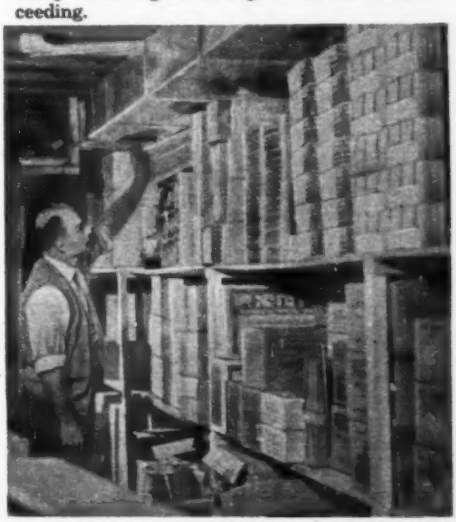
Although many mail order firms use magazines and newspapers to advertise single items, the larger established firms have proven that direct mailings to prospective customers and previous mail order buyers is far more profitable.

A notice is then sent to all franchise holders explaining in detail the complete sales program for the particular market covered. The dealers then have the option to accept the offer or wait for a complete new sales program set up for a new market. At least four complete new sales programs are prepared by Mail Order Associates each year.

If the dealer decides to go ahead he may begin ordering catalogs (his personal name or business name is printed on all sales literature), and mailing them to his lists of prospective customers. As he receives orders for merchandise he simply forwards the orders together with addressed shipping labels to M.O.A. and they fill the orders and mail direct to his customers with the dealer's shipping label attached to each parcel. In some cases M.O.A. prepares a catalog of merchandise which manufacturers have agreed to drop-ship for the dealer. Mail Order Associates simply turns over this list of firms to the dealer and he works directly with the manufacturer. The customer pays the dealer the retail price of each item in the catalog. The dealer in turn pays M.O.A. or the manufacturer only the wholesale price of each item and pockets the difference—which really adds up when you mail a few hundred catalogs a week.

The operation of Mail Order Associates is based on a small margin or profit, but tremendous volume, which spells BIG PROFITS FOR ITS FRANCHISED DEALERS.

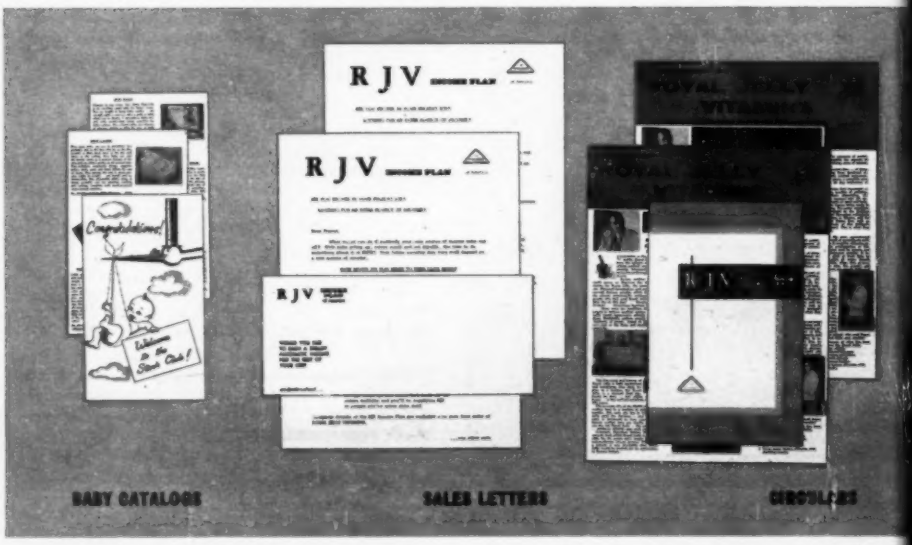
Mail Order, however, just as any other business, does involve a certain amount of risk. But the initial investment required is relatively small ($80-$100) compared to other businesses. By eliminating the initial cost of stocking merchandise and preparing expensive catalogs, M.O.A. dealers can keep their initial investment to a bare minimum. On the other hand, few other occupations offer such exceptional income potential as a small specialized Mail Order business. The important thing to remember is that in Mail Order like everything else, the person who works hard and is not easily discouraged has a good chance of succeeding.



**Big firms will carry all stock for you. They ship orders direct to your customers using your own shipping labels.**

*(Advertisement)*

# Your OWN Catalogs of Top Mail Order Items!




**Mail Order Associates will prepare your catalogs, write your sales letters, supply mailing lists and even ship merchandise for you, using your own shipping labels!**

We don't say you'll be a mail order millionaire or another Sears & Roebuck, but if you're looking for a business of your own with a potential income of $50,000 per year the answer is mail order.

MAIL ORDER ASSOCIATES

Gilbert Turk, founder of Mail Order Associates, is certainly well qualified to head such an organization. Formerly president of two large mail order companies, his articles on selling by mail have appeared in national magazines throughout the country. He has sold everything from build-it-yourself plans to name brand appliances. When the paint-by-numbers fad was sweeping the country, he invented a three dimensional paint set which sold like wildfire. With Turk, Mail Order is almost an obsession. He thinks, talks and lives it.

Firmly convinced that no other business offers the tremendous opportunities of mail order he is an outspoken advocate of the man or woman who wants to start in business for himself. As Turk puts it, "By all means, start your own business and start TODAY! If you want security, independence and a chance to hit the jackpot, make your choice Mail Order. There's nothing like it. Absolutely nothing!"

## FOR FREE DETAILS

**Mail coupon below today**

**Mr. Gilbert Turk, Pres.**
**MAIL ORDER ASSOCIATES**
**Dept. M-85, 130 W. Pleasant Ave., Maywood 85, N. J.**

Dear Mr. Turk:
The co-operative dealer franchise plan with Mail Order Associates sounds exactly like the kind of lifetime business of my own I want to establish. Please send me complete FREE details on how I can get my own franchised dealership.

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

**January** February · March · April
May · June · July · August
September · October · November · December

# Mechanix Illustrated

1959

# AUTO RACING MUST BE OUTLAWED!

. . . SAYS OREGON'S SENATOR NEUBERGER

TURN PAGE

57

# AUTO RACING MUST BE OUTLAWED!

***BY SENATOR RICHARD L. NEUBERGER***

**with**

**Lester David**

IT happened recently in my home State of Oregon: A car driven by a young automobile race driver hurtled out of control at Portland Speedway and crashed into a retaining wall. Don Porter, father of four small children and himself only 31, died violently.

Six weeks earlier at the Indianapolis Speedway, a car went out of control and immediately caused a dozen others to pile up. Headlong into the traffic jam rushed Pat O'Connor of Indiana. Unable to stop, he plowed into the rear of a car and flipped over. Young O'Connor's car burst into flames and he perished in the wreckage.

**And two days after this,** a Porsche-Carrera driven by Hodge Bruch turned over three times during a race at Bridgehampton, N. Y. Bruch, father of three, died on the way to a hospital.

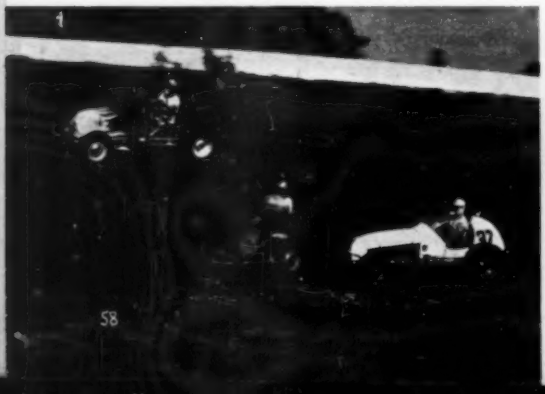
Some people call this sport. I call it wanton, tragically unnecessary bloodshed. Some call it healthy, exhilarating competition. I call it shameful and uncivilized.

The three deaths I have described are only the latest in a long, macabre list which stretches back over the years almost to the very start of automobile racing. Every step of the way, car racing has been accompanied by massacre. Tracks all over the country have counted—are still counting!—their dead. I believe the time has come for the United States to become a civilized nation and to stop this carnage which has persisted too long. I believe full study should be given to outlawing automobile racing, once and for all, by legislation effective in all 49 states.

There are a number of reasons why I am convinced this must be done.

**In the first place,** the exhibitions are degrading to the human spirit. I do not pose as a psychologist, but is there any serious doubt that the majority of persons who throng to these proceedings are there because of the extreme hazard to the drivers? For every spectator who really understands and loves automobiles, there are a hundred who come be-

**DRIVER DIED in this spectacular crash (see cover) at the Dayton, Ohio Speedway. After**



**LE MANS CRASH left 82 dead, 78 injured as spectators were crushed or burned to death by racing car hurtling off road.**

cause men are in constant peril of being killed or mangled.

And this, to me, is pathetic. It is a lowering of the essential dignity of man. It approaches dangerously close to the raw crowd lust of the Roman "circuses" where the populace jammed the arenas to watch gladiators battle to the death.

**We toss critical barbs** at the Spaniards because of their bull-fighting. We roll our eyes heavenward and shudder at the goriness of this national sport. And yet how many bull fights are as bloody as the race not long ago in San Diego, Calif., where a woman driver died hideously and newspaper photographers took pictures of her hand protruding agonizingly from beneath her over-turned racing car

I have heard and read many criticisms of some films, TV programs and books because they expose our children to violence. Yet we permit our youngsters to visit automobile race tracks. Is not the impact of a supposedly violent television show upon an impressionable young mind comparatively mild compared with the effect of a roaring, rendering crash in which racing drivers are slaughtered or maimed?

My second reason for urging abolition of automobile racing deals with the danger to the lives of the participants.

**Does it make any sense** to permit continuation of a sporting activity when the death of a driver or two in a major race is considered normal? In a recent discussion of the subject in Harper's Magazine, Prof. Laurence Lafore of Swarthmore and Robert W. Lafore quoted a [*Continued on page* 156]

**McCAHILL REPLIES**

**Don't miss Tom McCahill's reply to this provocative article. Tom will defend auto racing in a no-punches-pulled answer in the February issue.**

**hitting another car, No. 37 driven by Jim Rigsby plunged 50 ft. over the track rail.**

MECHANIX ILLUSTRATED
BRIGHT IDEA AWARD

# HOME UTILITY CART

WIN $50

We will award $50 each month to the first person who tells us of a new and useful gadget that is patented and in production. Manufacturers are also eligible for this award. Pictures and a description should be sent to Bright Ideas Editor, Mechanix Illustrated, 67 West 44th Street, New York 36, N. Y.

YOU'LL find many uses around the house for the Home Utility Cart. It has a plated tubular steel frame, a lightweight, bright red polyethelene basket and semi-pneumatic tires. Mom can carry laundry or soak dirty dishes in it. Dad can ice his beer at parties or use it to hold grass clippings. It retails for about $14.95. •

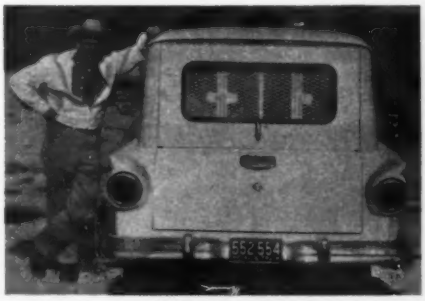
TUB can be used as a laundry basket, lifts out. It is made by Kol, Inc., St. Paul, Minn.

LIQUID refreshments can be iced in tub. It can also be used by Dad for lawn, garden.

MOBILE doghouse provides adequate ventilation via louvers in the roof which also direct rain water down to the road by means of drain tubes.

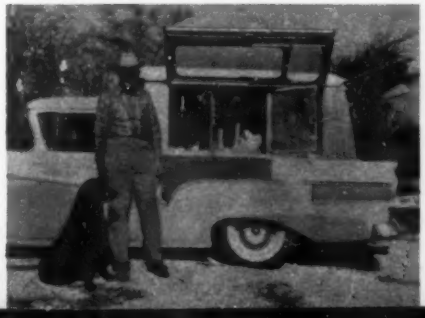
# Dog Wagon DeLuxe

DOWN Missouri way professional handler Bill Wunderlich of Wentzville hauls his valuable field trial dogs in a Ford Ranchero, "customized" to house seven dogs, each one with a private, ventilated kennel carpeted with cedar shavings. John Mueller of St. Louis designed the $1,100 custom coachwork which weighs only 500 lbs. •



WUNDERLICH WAGON. Coachwork, addition of leaf to each of rear springs did job.

RIBBED rubber inlay on rear fenders protects paint, gives dogs good jump grip.



DOGGY DRAGGER has enough storage under kennels to tote a gross of dog biscuits.

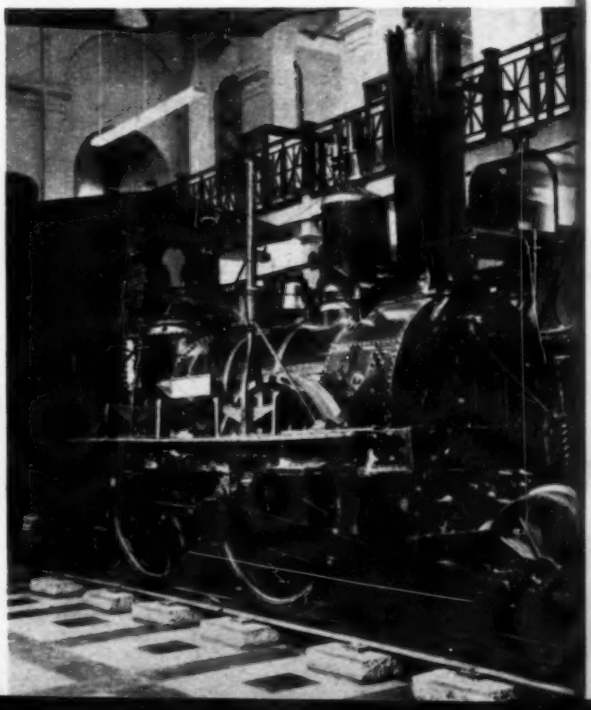
# THE BEST AT OUR

WASHINGTON, D. C. is the site of the United States National Museum, shown at upper left, popularly known as the Smithsonian Institution. This world-famous landmark is a warehouse of knowledge for the many thousands of culture-minded people who flock to its great halls each year. It is a fountainhead of information on such subjects as American history, geology, paleontology, archeology and ethnology. The exhibits on these pages were selected by Dr. Leonard Carmichael, Secretary of the Smithsonian Institution, as some of the most interesting in the museum. When you visit Washington, D. C., be sure and drop in at our National Museum for a visit. We'll guarantee you'll be glad you did. •

**SKULL of Australian native's relative is painted, hung by human hair on survivor's neck before burial.**

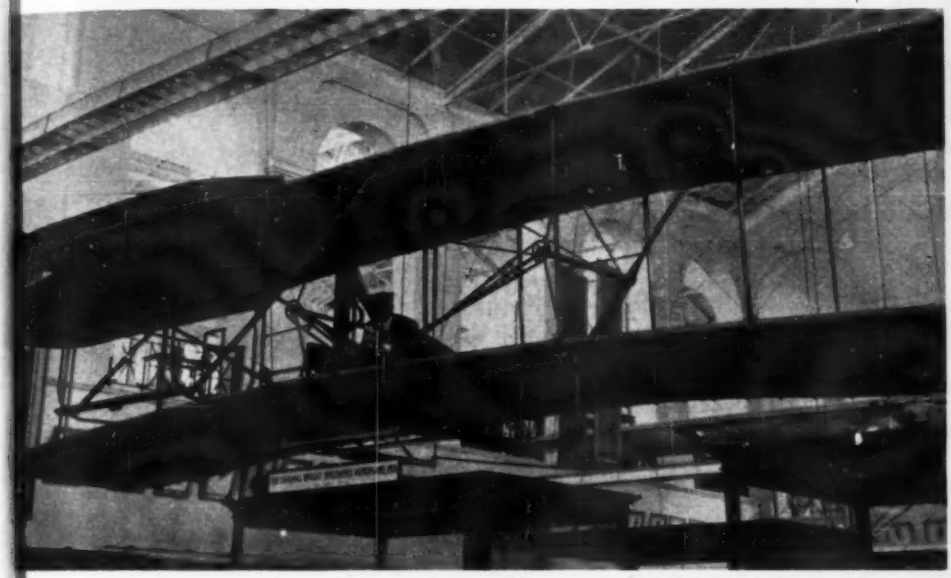
**JOHN BULL locomotive built in 1831 was used by Camden & Amboy Railroad in New Jersey until retired in 1865.**

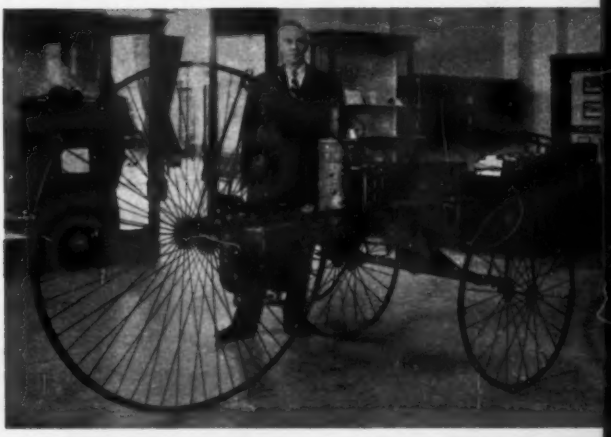
**SMITHSONIAN Secretary, Dr. Carmichael, and one of early Tom Edison light generators.**



# NATIONAL MUSEUM

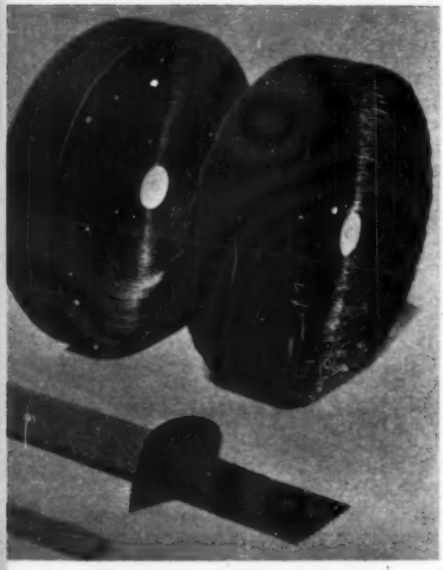
**WRIGHT BROTHERS original flying machine which took to air at Kitty Hawk, N. C., in 1903.**





**STEAM CYCLE, vintage 1880, is the oldest horseless carriage in collection, ran on 100 lbs. of pressure.**

**AZTEC stone statuette is Maquilxochtl, God of spring, flowers. Lava box held heart of sacrificial victim.**



## HERE'S "VELCRO"

VELCRO may put the zipper out of business. This new fastening material is made of two nylon strips. One contains oodles of microscopic hooks; the other oodles of microscopic loops. Pressed together they form an amazingly strong union, yet peel open easily. •

## FLYING SYRINGE

WHAM! The flying syringe hits just the right spot and calms the savage beast. The flying syringe or tranquilizer dart now being used by veterinarians is made by Palmer Chemical & Equipment Co., Atlanta, Ga. Rifle-fired, it stuns, won't harm animal. •

## NETTING MORE CHERRIES

BRUISED cherries are a source of great annoyance to connoisseurs. But things are looking up. A novel hydraulic tractor-mounted shaker boom with a cloth-covered folding catching frame is now being used to take the fruit unbruised. The cherry-shaker is still in the experimental stage but tests have shown that 36 per cent more fruit was harvested with it than by the conventional pail-picking method. The United States Department of Agriculture and Michigan State University are responsible for its development. •

# Mail for McCahill

**Uncle Tom is sorry he can't answer all his mail personally. In this column he'll answer the most interesting letters. Write to him at MECHANIX ILLUSTRATED, 67 West 44th St., New York 36, N. Y.**

● *I understand that if all automobile companies stuck to their current models for a number of years—the way they do in Europe—the price could be reduced considerably each year. Right or wrong?*

*George Hardy*
*Fresno, Calif.*

Definitely right, George. One of the big reasons for the current high automobile prices is the tremendous re-tooling involved each year, costing hundreds of millions. Oddly enough, I recently fired this same question, with an addition, at a high Ford official. I asked him how much they could lop off the price every year if they had stuck to the '57 Ford model, and if the cars wouldn't be much better as a result. I knew what the answer was but I wanted to hear him say it. He agreed that it would not only knock the price down considerably but the quality control would be a great deal better, and he cited the Volkswagen as an example. He said, "If any of the Big Three built the same car for 15 or 20 years, as Volkswagen has done, all our cars would be absolutely faultless." So I asked him, "Then why the hell don't you do it?" His answer was 100 per cent honest: "No manufacturer in this business would have the guts to try to stick to one model." He added, however, "It sure would be great if we could."

● *Enjoyed seeing the picture of your boat, The Rooster, in MI. I have a boat very much like it and recently got in a jam when I refused to take an in-law out in the ocean fishing because he doesn't know how to swim a stroke. My wife pointed out that hundreds of people who don't know how to swim go out in small boats every weekend during the summer. Anyway, there was a big family fight. As I'm an old reader I'd appreciate getting your opinion on this.*

*H.P.*
*Miami, Fla.*

I'm with you all the way. Having a person aboard who doesn't know how to swim is an extra responsibility in case of an emergency. However, these non-swimmers can present a pretty strong argument by pointing out that thousands of people travel in airplanes every day and damn few of them know how to fly.

● *When MI arrives the first thing I look for is the index in order to locate your column. Really get a bang out of it. I would like to challenge Mrs. Betz to a hair pulling contest.*

*Mrs. B. Evans*
*Fairmount, Ind.*

If Mrs. Betz (who called me "surly, insolent and ugly") reads this challenge and isn't chicken, I'll do my ugly best to have the match in Madison Square Garden.

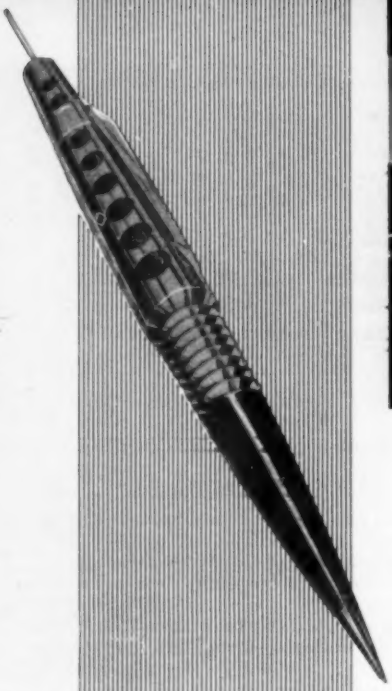
● *I think the Texas Oil Company should be congratulated for presenting the major advance in National Defense in this century. After seeing your basketball-like head on billboards everywhere I go, no one would have the guts to invade us with your picture facing them at every turn. Incidentally, what kind of crash helmet is that you're wearing in that picture?*

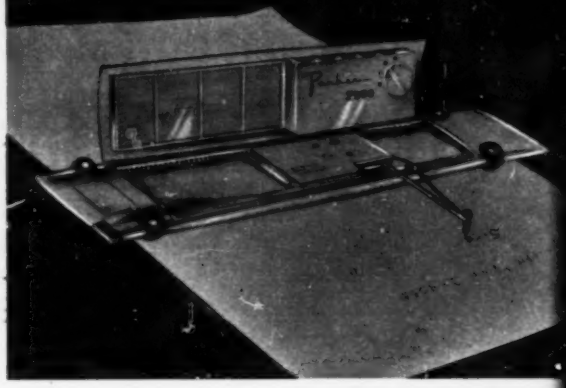
*Phil Tracy*
*Cleveland, Ohio*

Crash helmet, hell—that's my shower cap.

● *Your advice to Mr. Gelb on page 46 of August 1958 MI regarding the use of high-test gasoline in the lower compression engines leaves me wondering. My company's 1957 six-cylinder Fords have a compression ratio of 8.6:1, which is slightly higher than the 8.2:1 you used in your answer to Mr. Gelb.*

[Continued on page 144]





# Tomorrow's Pens

THE pen at left is solar-powered, burning an impression onto the paper with an electric arc. The instrument above is a Voice-Writer, combining a dictaphone with a script-writing pen. Both are dreams of Parker Pen Co. stylists, preparing for tomorrow's brave new world •

# MAKING SUBS LIGHTER

ATOMIC subs are being given added buoyancy by filling structural voids with Lockfoam, a polyurethane foam, instead of the usual pitch and pine. Saving: nine tons per sub. •

**STABILIZER of A-sub Skipjack is filled with liquid Lockfoam which expands rapidly to fill cavities.**

**DEMONSTRATION shows how small quantity of the plastic foams, expands and then sets as a solid.**

# BABY ACES BY THE DOZEN

A. G. Ambriole, Fort Wayne, Ind.

Kneil Kleier, Inola, Okla.

Victor Wendt, Opa Locka, Fla.

Jesse Ross, Melvin Straw, Fremont, Ind.

Carl Walters, West Bend, Wis.

Lester Zehr, Jr., Fort Wayne, Ind.

A WHOLE family of home-built MI Baby Aces dominated the Experimental Aircraft Association's 1958 Fly-In at Milwaukee and included the clan's grandpappy (top right), model for the plans published by MI in 1955. It was flown in by present owner Jack Cornes. Ingenious design changes, especially in the tail, are evident in the progeny. Names under the planes are the owner's and in most cases the builder's. There are now 51 Aces flying and 190 being built. Beauty made by Chicago's St. Rita High students (right, second from bottom) won MI Achievement Trophy for the year. •

Jack Cornes, Highland Park, Ill.

Leroy and Gerald Young, Viola, Ill.

Everett Hepler, Rochester, N. Y.

Robert Stephens, Wichita, Kan.

St. Rita High School, Chicago, Ill.

Leroy Huff, Tony Spezio, Oklahoma City.

## MI TESTS THE ARMY'S NEW M14...

# HAVE NEW GUN, WILL TRAVEL

By Robert Hertzberg

**M14 MAGAZINE holds 20 rounds, snaps in quickly, gives continuous fire power.**

SHED a tear. The famed Garand M1, lugged around by millions of GIs of two generations, is being replaced by a brand-new rifle known officially as the Springfield M14. This weapon is the product of a coordinated team effort by ordnance experts of the Army's Springfield (Mass.) Armory. Already underway is a $35,000,000 program for quantity production of the M14 and two companion guns.

**The M14 is the first member** of a new United States small-arms weapons system built around the 7.62 mm NATO military cartridge. The 7.62 is about $\frac{9}{16}$ of an inch shorter overall than the familiar M1 cartridge but otherwise has the same outline and packs the same powerful punch.

Two features of the M14 struck me immediately when I saw the gun for the first time on the test range of the Spring-

M14 CARTRIDGE and magazine are shown with longer M1 slug, eight-round M1 clip.

M14 WEIGHT is ten pounds. Note long flash suppressor forward of front sight.

field Armory: a big box magazine sticking out through the bottom of the stock, just forward of the trigger guard, and a long, slotted flash suppressor attached to the end of the barrel, beyond the front sight. The detachable magazine holds 20 rounds, as against the eight-round clip of the Garand. An empty magazine can be jerked out and a fresh one snapped into position in a bare second, giving the soldier virtually continuous fire power.

**The suppressor is the answer** to a common complaint from the Korean front that the bright muzzle flame of the M1 provided enemy gunners with convenient aiming points. The slots break up the flash into relatively dim little sparks that are scarcely noticeable 50 yards away.

Ready for action, the M14 weighs in at just ten pounds, a scant four ounces under a loaded Garand. However, because of the stabilizing effect of the low-hung magazine, it handles beautifully and "points" naturally.

The M14 is designed to fire either semi-automatic or full automatic, depending on the setting of a small lever above the trigger on the right side of the stock. However, rifles will be issued to troops with the lever replaced by a blank stud and with the mechanism set for semi-automatic fire only. The lever will be furnished separately and will be installed at the discretion of field commanders.

**The sample M14** put at my disposal was fitted with the shift lever. After firing the gun several times both ways, I think I know why the full auto feature is being held in reserve: In peacetime, ammunition manufacturers wouldn't be able to make [*Continued on page* 156]

Hunting and Fishing

# HUNTING THE SNOWSHOE RABBIT

By Wynn Davis

DEAD GAME. Five swift snowshoes were not quite quick enough to escape Deadeye Davis and trusty basset hound dog.

THE big hunting prize of the long-eared tribe is the huge, lightning-fast snowshoe rabbit (he can do 30 mph) of the deep forests of the north and the higher altitudes of the mountain ranges. He is not actually a rabbit but a true hare. And he is blessed with all the speed, endurance and tricks for fooling hounds and hunters that have made hare hunting such a great sport wherever these animals are found.

**The snowshoe,** or varying hare, is big. Sometimes he exceeds five lbs. but usually is about twice as heavy as the cottontail. The snowshoe also has Seven League Boots that he loves to use at the slightest provocation. Sometimes he will beeline it for half a mile or more before turning to circle back. When driven hard he is likely to run the tails off the dogs by taking out over the hills and far away to another swamp or valley more to his liking.

**The varying hare** is happiest and healthiest in cold country where the snows lie deep as a man's belt four or five months of the year. To handle so much snow, nature gave the varying hare huge, well-padded feet with plenty of hair between the toes. From these huge feet, he gets his nickname—snowshoe rabbit. [*Continued on page* 146]

# YOUR NEW PHONE

TELEPHONE subscribers will soon be getting a new, small-size phone like the one shown at left. The set will be offered in several colors and, later, in two models. The first model will feature a combined night-light and dial-light. The second model will have a two-line pick-up with a hold button for the first line and provision for use with home-intercommunication and speakerphone systems. Quantity production of the novel telephones is expected to begin in 1960. •

# THE WONDERFUL RAT

THE Rat is an amazingly versatile Canadian vehicle developed and built by Canadair Ltd., Montreal. Only 1,500 lbs. in weight, the aluminum buggy can tote 600 lbs. of cargo while towing another 1,000 lbs. on sleds or toboggans. The unique tandem vehicle has a small gas engine in the front section with a takeoff to power the cargo section. It runs in water, over snow and has climbed a 50 per cent grade. It is for use with troops in northern Canada. •

# IT FINDS METALS

A NEW transistor pipe locator and metal detector designed for playtime or serious prospectors is now on the market. A product of the Gardiner Electronics Co., Phoenix, Ariz., the new device has a range of 21 ft. It uses a total of eight transistors, one in the transmitter and seven in the receiver. The two flashlight batteries in the receiver are said to give 3,000 hours service while the two in the transmitter operate a claimed 350 hours, making it a very economical metal-locating device. •

# IT'S NEW

**PHONE DOME** called the Vistabooth gives a full view of all the revolving doors (so you won't miss Auntie Gert) plus desk phone. From Bell Labs.

**COP ARMOR**, not so chic as Galahad's tilting suit but weighing almost as much (65 lbs.), is fully bulletproof. A Philadelphia Police Department development.

COPTER PA system (left) shown on USMC chopper is the first to prove loud and clear enough to let pilot talk to radioless ground troops through engine noise. The four speakers are Atlas King Cobra-jectors; amplifier is 50-watt Stromberg-Carlson.

REAR-ENGINE SPORTS COUPE by NSU, famous German motorcycle maker, has rear twin-cylinder, air-cooled, overhead cam engine of 35 cu. in. Body's by Italian body builder Bertone. Top speed is said to be 85 mph, fuel consumption's a claimed 38 mpg. The price is $1,398.

BRITISH FOR AMERICAN market, new Norton Nomad has, maker says, Limey lightness plus the strength and power needed for off-road and long-distance American riding.

ELECTROSTATIC PUMP by GE has no moving parts. Electrodes separated by insulating fluid pull dust in fluid towards them. Particles drag water molecules with them.

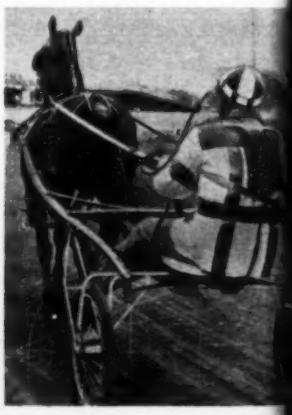
CONTINUED...

# IT'S NEW

**VOLVO PV 544 series, latest Volvo offering, has rear window reaching to rain gutter: remember McCahill's "blind corner" gripe? PV 544 comes in four models.**

**LIFE SHIRT called the Floater by Golden Gate Sportswear, Oakland, Calif., inflates chemically in the water, becomes a life preserver (see picture, left, below).**

**GOGGLE WASHER for washing mud off sulky pilot's windshield during foul weather harness races is demonstrated by Bobby Cherrix. Note rubber back tank.**



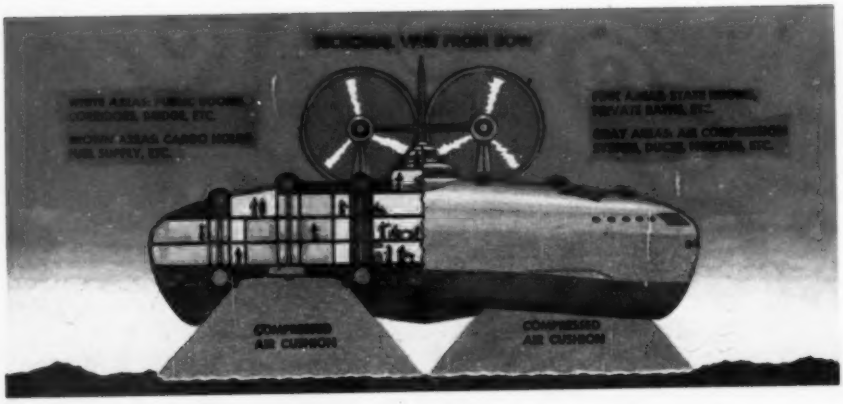
**ELECTRONIC HAND**, Russian, carries out movements the man merely "thinks." Only connection is through metal bracelet on his arm. Next goal: to give it "feeling." Hand can pick up a full glass, make a fist, etc.

**SMALLEST TWIRLER** twirls platter on a tiny spindle—no turntable required. Plays phonograph records of any size, operates on flashlight batteries, costs $40. Made in Britain. Right cute little thingumajig—ain't she?

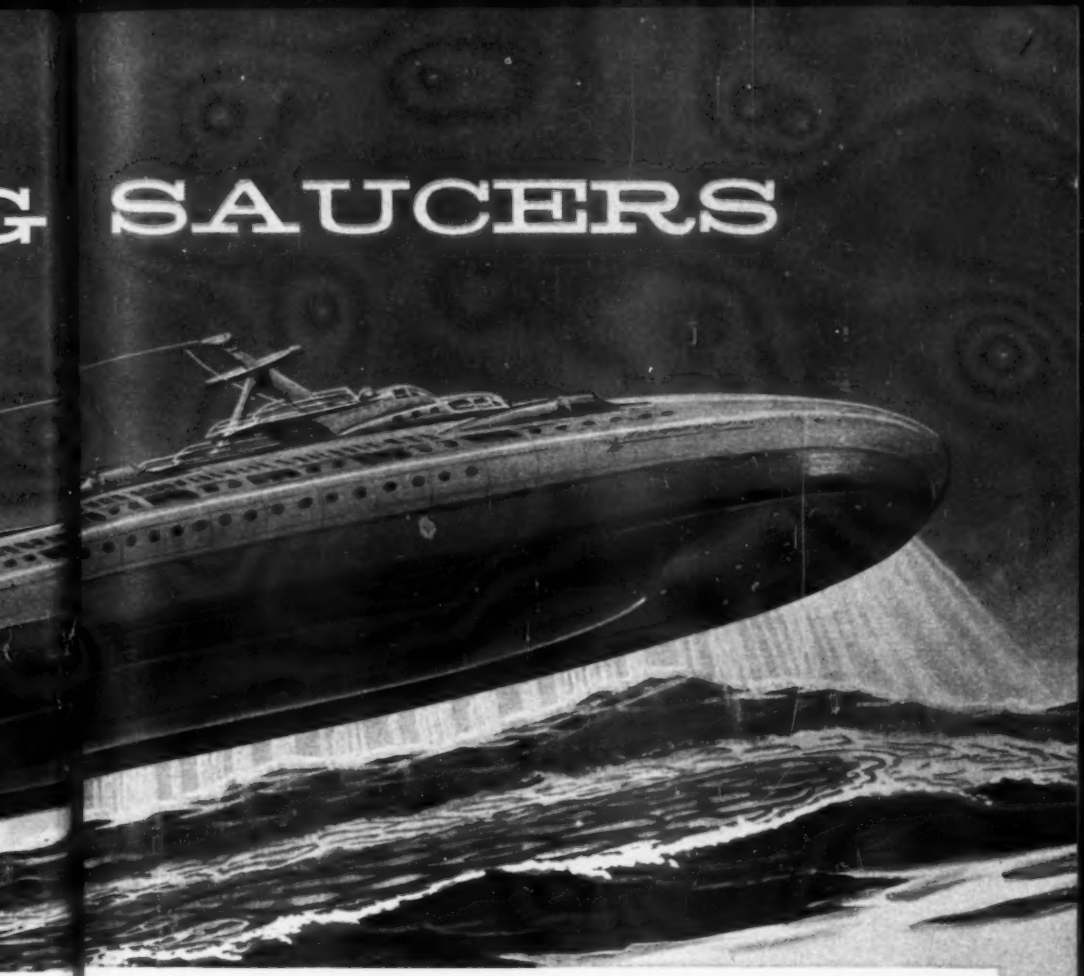
**INFANTRY'S GUIDED MISSILE**, British, is a close-range anti-tank weapon launched by a pistol-like firing device. Soldier guides missile to visual target by a thumb control gismo. Missile is 53 inches long, weighs 45 lbs., uses solid fuel, needs no pre-launching warm-up.

WORLD OF TOMORROW

# SEAGOING



# G SAUCERS



**By Frank Tinsley**

THIS radical new ship is now under development by the British government. According to the London Daily Mail the Saunders-Roe Aircraft Co. is now hard at work on preliminary research.

The idea is essentially the same as that proposed for Ford's futuristic "Wheel-less Car." (See Oct. '58 MI) The MI design calls for an elongated saucer form with a horseshoe-shaped cavity underneath. Compressed air is expelled from nozzles in the top of this cavity, which contains the pressure and directs it against the sea's surface, lifting the saucer a few feet above the water. Airplane-type propellers, driven by gas turbines, propel the skimmer at high speed. In docking or lying at anchor, the pressure is gradually reduced and the ship lowers to the water. A water propeller and rudder are provided for surface maneuvering.

The British expect saucers to carry up to 1,000 passengers, hit over 100 mph. Development will probably take about ten years. •

MONEY MAKING IDEA

By
Richard C. Redmond

# COFFINS FOR YOUR PETS

CERAMIC COFFIN for deceased birds was idea hatched by Bob Carpenter of Buffalo.

DID any birds kick the bucket in your house lately? If they did, you can bury them in a miniature bird coffin designed and built by Bob Carpenter of Buffalo, N. Y., founder of The American Pet Casket Co.

Bob's tiny coffins-for-the-birds idea was hatched one day when he heard a woman complain about the scarcity of suitable caskets for dear departed songsters. He checked the local pet shops and found only a crude wooden box used for the purpose.

**Bob decided to design** his own bird coffin. His sister's mother-in-law, who was a worker in ceramics, agreed to help him. They came up with a 3x7-in. casket with looks and durability.

The little caskets are white with painted linings in bird colors of green, yellow and blue. The lids are painted with flowers and each one is decorated with a tiny molded bird. Inside is a wee plastic foam mattress and pillow to make it look authentic.

The ceramic models cost up to $6.50. If you want to give your deceased bird a ball of a burial you can also purchase a miniature floral wreath. This is a 4x6-in. job composed of artificial flowers, ribbons and lace with a Styrofoam back. Three sticks are furnished to keep the wreath erect on the grave.

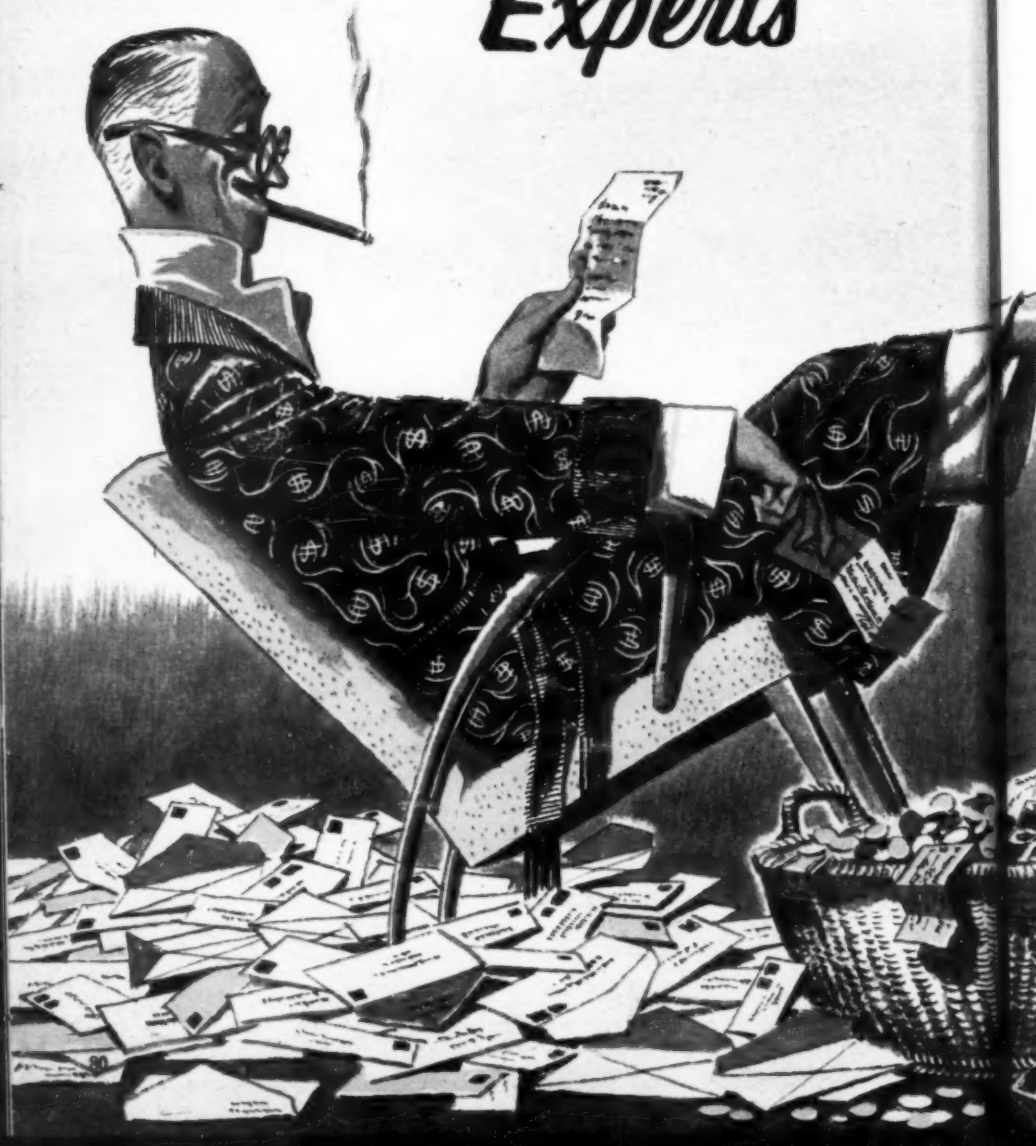
"People don't put a price on sentiment when it comes to their pets," says Bob. "Why some folks even bury their canaries in the family plot!" •

FLORAL WREATH in miniature is for bird idea hatched by Bob Carpenter of Buffalo.

"FOR a cool cookout, boil weenies with a Therm-O-Matic immersion heater," says MIMI, our pretty product-tester, as she plunges it into the pot. Made by Kniesley Electric Co., Toledo 3, Ohio, the heater comes in five models priced from $5 to $15. Heating element is completely insulated and a cut-off switch keeps unit from overheating. •

# MIMI

# Secrets of the Mail Order Experts



**By Edmund Gordon**

IF you thought the legendary salesman who sold ice boxes to Eskimos was a sharp character, step up and meet his master. This fellow actually sold imitation shrunken heads to the countries where the real things are made!

He's E. Joseph Cossman of Hollywood, Calif., who conceived the idea of packaging imitation Sanforized noggins, the kind made for real by South American Jivaro head-hunters, and selling them via mail order as souvenirs.

**Joe also threw in a straight-faced set** of instructions on how to shrink a head, including such pertinent information as: "The refrigerator is the best place to keep a fresh head." He printed this gay warning on the cartons: "Fragile. Handle with care. Shrunken head."

Joe's gagging ingenuity brought more than half a million orders—including a huge demand from Jivaro country, Ecuador, Peru and Guatemala!

The fabulous mail order [*Continued on page* 154]

## CAMERA GUN

"FROM Kalamazoo direct to you," murmurs Sp2 Dennis Russo, a Kalamazoo man with the U.S. Army—and *Pow!* he lets a low-flying target have it right in the kisser. Mounted on his trusty M1 is a 35mm Star Robot camera. This gunsight camera system was developed by the Army Combat Development Experimentation Center at Fort Ord, Calif., to record the hits made by the rifle on low-flying aircraft during recent weapons experimentation. Camera's shutter action is synchronized with rifle's trigger. •

## AUTOMATIC WINDOW

AT last, a window that closes itself when the rain starts. The Truscon Division of Republic Steel has come up with an experimental model of a window that closes automatically in response to cold, rain, snow and wind. Sensitive electronic-mechanical contacts on the outside of the window set off an electric motor that gently closes the window. The window consists of three adjustable vents which project simultaneously from the vertical closed position. The vents reverse completely, so Mother can wash the window entirely from inside. Whenever the window is partly open, a screen rises automatically from the sill; when window closes the screen sinks out of sight. •

## CENTIPEDE TRUCK

A 22-wheeled truck from the University of Michigan is charting the surfaces of Michigan highways to test their ability to bear up under year-round traffic. The 16 extra wheels are linked to sensitive instruments that measure the "profile" of the road, total irregularities per mile and similar facts for Highway Department. •

# NEW ROTO-JET HELICOPTER

LATEST thing in helicopters is an import called the Djinn. Djinn is another way of spelling *genie,* an Arabian supernatural being, the most famous of which was Aladdin's Slave of the Lamp. As you will recall, kiddies, Aladdin had only to rub his lamp and the genie appeared, ready and able to do anything Aladdin wished.

The new French helicopter built by Sud Aviation comes close to living up to its name. It hedge-hops, goes forward at 81 mph and straight up at 6,000 feet per minute. Power is fed through the rotors in the same way it is fed through a rotary lawn sprinkler, only here air is used instead of water. Left-over air pressure goes out the exhaust, providing jet thrust that gives the Djinn 30 per cent of its forward power. This power system produces no torque, so no anti-torque rotor is needed at the tail; instead the Djinn has only a rudder.

The rotor has such inertial movement that the Djinn can be dead-sticked down, can hover with the motor off and even take off with the motor off. The Djinn makes a marvelous anti-tank weapon, being able to spring from hiding, fire a guided missile and hide again.

Its French builders have leased the right to build the Djinn in the U. S. to Republic Aviation, Farmingdale, N. Y. Recently Dennis Prost, French test pilot for Sud Aviation, took MI's own Harvey Gardner for a fun ride in the Djinn. From his confused, happy, babbling report we gather that he never had such fun since he went to the rooftree of the barn on the haylift. Test pilot Prost told our boy the Djinn is so safe "you never worry about anything, you jus' fly, the way you swim or walk."

—*Harvey Gardner*

McCAHILL TESTS

# THE '59

***"The '59 Plymouth is an outstanding buy— good-looking, comfortable, able and by far the best in its field in all departments."***

**By Tom McCahill**

PLYMOUTH should be given a gold medal, in this writer's opinion, for being one of the few cars for '59 which hasn't taken a backward step, somewhere along the line. I could save you a lot of time, and me some typewriter ribbon, by just stating flatly that the '59 Plymouth is the outstanding car in its field. This, unfortunately, would leave me with an unproven case. As the woods are full of skeptics who demand evidence and have paid their money, it's my job to see they get it—so here goes.

As one bum once said to another, "If you're so damn smart, why ain't you rich?" Plymouth, though the outstanding car in its field, can't hope to finish better than third in automotive sales this year and it won't take a wizard to figure out why. For many years Plymouth was *not* the outstanding buy. Therefore, its sales didn't pile up enough cash to build enough factories and plants around the country even to push competitors A and B closely in the big national rat race for Production King. Tie this to the fact that both of its prime competitors have more than twice as many dealer outlets and the answer is no longer puzzling. However,

nd-
ish
ales
d to
ears
buy.
up
ries
n to
the
tion
n of
than
the
ver,

ated

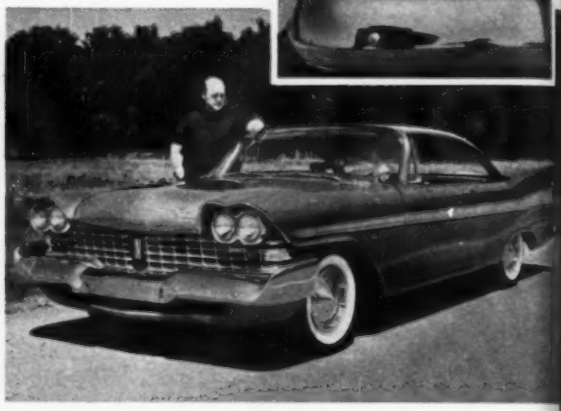
# PLYMOUTH

**PLYMOUTH torsion-bar suspension system is tops, says Tom who gives it the works, above. In the looks department, Chrysler-made product is "A pretty smart package," Tom says.**

## TEST CAR SPECS

MODEL TESTED: **1959 Plymouth Sports Fury with Golden Commando engine.**
ENGINE: **OHV V8** cyls; **361** cubic ins; **305** brake hp; **395** ft-lbs max torque; **10** to **1** compression ratio. Bore **4.12** ins; stroke **3.38** ins. Fuel required: Premium. Standard axle ratio: **3.91.** Wheelbase **118** ins; length **210** ins; height **54.1** ins; width **80.3** ins; front tread **60.9** ins; rear tread **58.7** ins. Weight **3,515** lbs. Gas tank capacity **20** gals. Turning circle diameter **42.2** ft. Tire size **7.50 X 14.**
PRICE (without optionals): **$2,753.**
PERFORMANCE: **0-30** mph, **3.4** secs; **0-50**, **6.1** secs; **0-60** mph, **8.2** secs; **40-80** mph, **4.2** secs. Top speed **122** mph. All times recorded on corrected speedometer.

**NEW LOOK taillights protrude between bumper and fin deck, right. Swivel-out-and-in front seats are standard on Fury models, optional on several other models. Redesigned grille boasts arched "eyebrow" headlights.**



despite the above, I stress the word "outstanding" and if I can't back it up, my ears should be whacked off for parakeet fodder. So with a few apologies to Clarence Darrow and One-Eyed Connolly, here's my case: Plymouth, like the rest of the Chrysler line, has by far the finest suspension system ever built into an American automobile. That is, of course, the torsion-bar system. The feature generally touted by most competitors today is the softer, more comfortable ride they claim research has shown is what the buyer really wants. To obtain this "soft ride" objective without torsion-bar suspension, sacrifices must be and have been made.

**With the more conventional** coil-spring suspension in the front or the extra-added zoological monstrosity, air suspension, firmness must be discarded. Most suspension systems today are a not-too-happy compromise between the firmness that means cornering ability, control and safety—and mushiness, another word for "soft ride." As we have already reported to you in the test of Plymouth's immediate competitors, both of these cars have lost much of their former firmness in order to match the softer ride obtainable with Chrysler's torsion bars.

Plymouth has a ride as unjarring as either of the other two, plus the firmness needed in corners and emergencies. To put it another way, in 1958 Plymouth could outcorner either one of them and had a better ride to boot. For '59 their ride is just as comfortable as either of the others and the car *can still corner.* This one feature alone would be enough to sell me if I were in the market for a car in this field because when I buy a car the one feature I want above all else is roadability and control at all times. In my book, performance and looks are rated far behind this *must* characteristic.

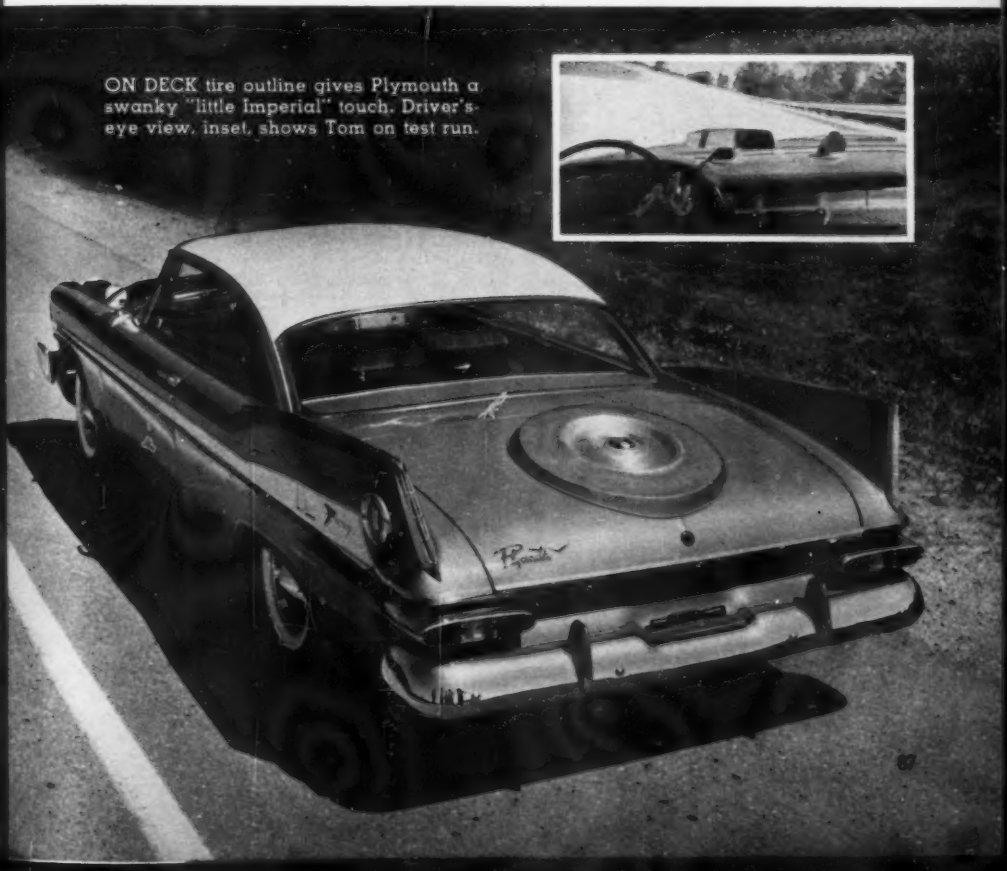
**To continue with my case,** we can now slide over to the looks. The car I tested was the 1959 two-door hardtop Sports Fury. This year, with its tire outline on the rear deck (which seems to look better on the Plymouth than on the Imperial), plus its individual swivel-out-and-in front seats, the Plymouth is

a pretty smart package. Now I learned a long time ago, the hard way, that styling or "looks" which appeal to me may look like a dog to you. But to me, in this year of fins in all camps, Plymouth has done it much more smoothly because they've had fins for quite some time. I think this Plymouth Sports Fury is as good-looking a car as any on the road and the whole package is in better taste than some others I've seen.

**Point Three,** considered very important by many, is: "Will the car go?" Here I must admit I was totally unprepared for what the tests brought out. The Sports Fury is the deluxe Plymouth, comparable pricewise to Chevy's Impala and Ford's Fairlane 500. To test the '59 Fury I was given the latch key to the Chrysler Proving Grounds, a day and half ride by fast bicycle from Detroit. My principal test car was equipped with a "Golden Commando" V8 engine that displaces 361 cubic inches, the largest in the low-priced field. The standard Fury engine is a 318 cubic-inch V8, for less furious sports, and the six-cylinder 230 cubic-inch engine is still available for the economist.

A great many years ago on these pages we originated the 0-60 test which has become pretty standard around the world by now, wherever the pointy-headed automotive set gathers. Zero to 60 mph, in the old days before the Korean fracas, used to reveal to the buyer what he might expect in a friendly traffic light race. Back in those days it took a hot Chevy to break 20 seconds and a Plymouth wouldn't even try, under its former reefed mainsails.

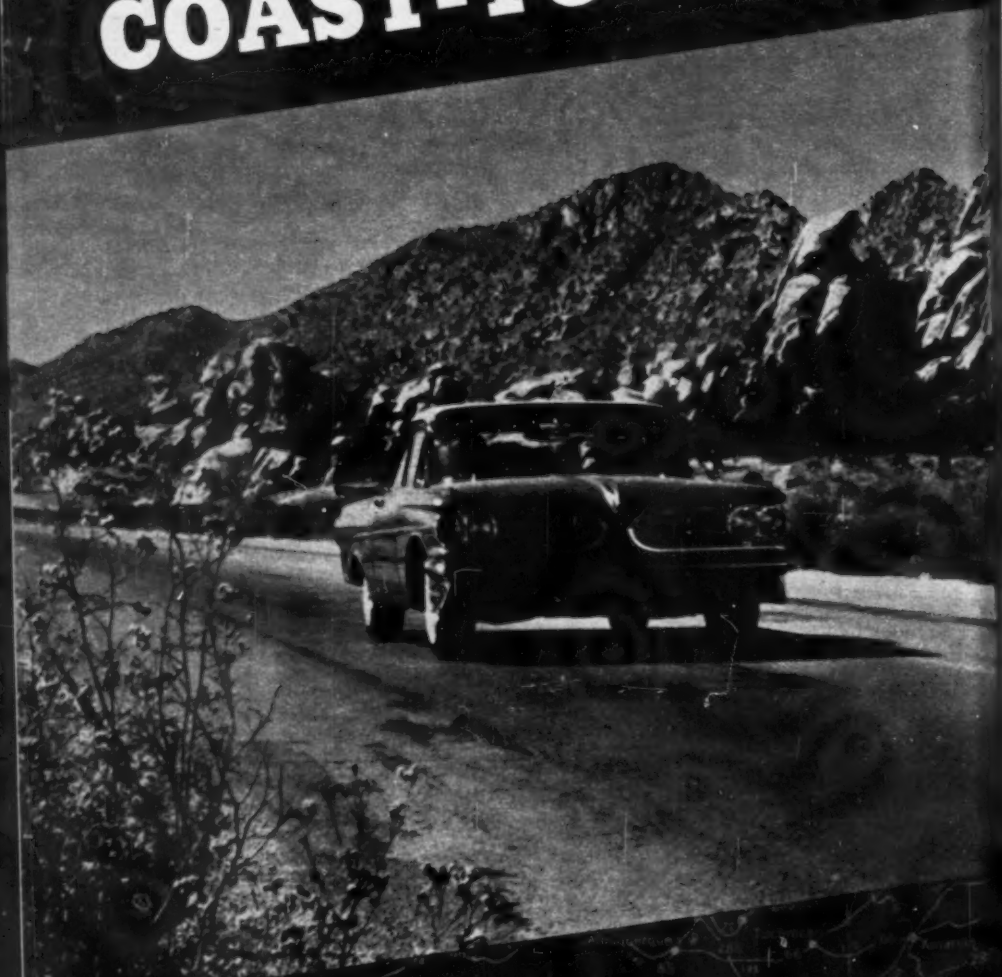
**As the years progressed,** the get-up-and-go properties prospered. For a long time the hot cars were the ones that could break [*Continued on page* 150]



ON DECK tire outline gives Plymouth a swanky "little Imperial" touch. Driver's-eye view, inset, shows Tom on test run.

By Tom McCahill

# COAST-TO-COAST



SAN DIEGO

# T FOR LESS THAN $36

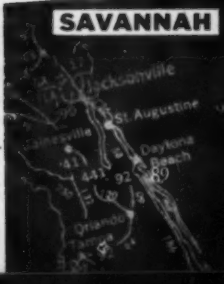
***Uncle Tom reaches into his bag of automotive know-how to average 21.7 mpg in a full-sized American sedan. Here's how you can do it, too.***

McCAHILL going for an economy run is similar to a pheasant going for a good swim. For years we've rarely given any gasoline consumption figures in our tests for a very simple and basic reason: they'd be inaccurate in most cases. The biggest single factor in gasoline economy is the driver, not the automobile. A driver with a right foot as nervous as a mongoose's nose, who starts off by flooring the gas pedal and rides up to traffic lights at fairly full bore before jamming his brakes on, may get less than 12 miles to a gallon from a car capable of 18 mpg properly driven. Every year I get many letters complaining about low gas mileage. Some undoubtedly are justifiable complaints but many just reflect poor driving habits.

When I was testing the 1959 Pontiac, during lunch with President Semon E. "Bunky" Knudsen and Public Relations chief Bob Emerick the subject of Pontiac's new, slightly de-tuned, gas economy car came up.

The car is basically the same as all other '59 Pontiacs; the only difference is the engine and the 2.87 rear axle. The engine has an 8.6 to 1 compression ratio, against 10.5:1 for the standard

**ON THE ROAD. Tom crossed hot Arizona desert in 104° temperature, left. Below, NASCAR's tall prexy Bill France and Chief Inspector Norris Freil, who kept boys honest, flank Jim McMichael and Tom.**



CROSS-COUNTRY junket began in front of the El Cortez Hotel in San Diego, Calif.

PONTIAC leaves the Yuma border inspection station between California and Arizona.

Pontiac V8, which means cheaper regular gasoline can be used. And the horsepower is 215 as against as much as 345 hp in some of Pontiac's hotter offerings. However, the torque of 390 ft. lbs. isn't much lower than the biggest engine's 420.

**The economy model,** known as the 420E, gets its top torque at a low 2,000 rpm against the wildcat's 3,200. This engine is available on all models and, though any performance difference from the hotter engines is undetectable without a stopwatch up to 75 mph, it will run out of legs in the vicinity of 100 mph. The big deal, next to the compression ratio, is the tamed-down camshaft, profiled to give top performance at useable turnpike speeds and at the same time allow for stretched gas mileage without the added expense of premium fuel. As I recall, Knudsen said, "Even a hotrod jockey such as yourself could probably get good mileage out of this car."

Nevertheless, I was surprised when, a few days later, I received a call from Pontiac asking if I'd be interested in making a long test run with this 420E model. A quick trip to Pontiac showed that Knudsen had not forgotten the remark about my being a hotrodder who'd never been on an economy run in his life.

Knudsen told me that he didn't want any of the usual economy run tricks, such as driving without shoes (which allows you to feather the throttle more delicately). He wanted standard lubrication in the car instead of the lemon-juice consistency oils usually used. Worst of all, he stated, "Air tire pressure should not exceed 30 pounds"—which is two pounds less than I normally carry in my own cars. The difference between starting with 30 lbs. of air and 50 or 60 can mean as much as two mpg—and 100 lbs. of air could add as much as four mpg in rolling country.

**In other words,** Knudsen wanted this test car driven the way any Joe Blow could, if he cared to. Last, but far from least, he insisted that the average speed be better than 40 mph. The proposed route was from coast to coast, starting from San Diego, Calif. and ending in Savannah, Ga. This would take us over mountains up to 5,000 feet high, across deserts and through many big cities and lots of traffic. When it was suggested

**TOLL STOPS, red lights and the Texas State Fair furrowed Chrome Dome's brow.**

**CROSSING OL' Miss. Heavy traffic east of the river cut average speed and mpg.**

that we run through the big cities at night when traffic was low, this was also vetoed and I soon began to wonder whose side these guys were on. As a relief driver I wasn't allowed to pick a feather-foot but my assistant, Jim McMichael, world-famed trunk-tester. Jim won the passing contest at Daytona Beach last winter, an event for lead-foots and nobody else. McMichael has always been about as economical on a throttle as the Armed Forces on expenditures. But the prospect of semi-gently driving from coast to coast sounded intriguing so I took on the assignment.

Seated right alongside of me at all times was Norris Freil, Chief Inspector for NASCAR, who was certifying the run. A few remarks showed me that Freil, whom I've known for years, was as straitlaced as a Marine top sergeant when it came to violating any of the rules. In the glove compartment of the test car was an electric clock with a split-second hand that was wired directly to the ignition switch. The moment the switch was turned on, the clock would start to run and, even when we were standing still, the elapsed time was being registered. When I asked Freil about turning off the switch and coasting down the mountains (an old economy trick) he not only said "No!" but refused to let us slip out of gear, even with the engine running. The car had to be under power at all times. As any automobile man knows, a manual transmission is more economical than an automatic job but our test cars were equipped with four-speed Hydramatic, as Pontiac sells more cars with this transmission.

**UNCLE TOM watches elaborate fueling ritual, below. Clock in glove compartment in photo at left recorded elapsed driving time. Other instrument is a vacuum gauge.**

**Our caravan,** including a photographer's wagon and another wagon for engineers and baggage, left San Diego shortly after seven in the morning. This was the first time I had driven my car, which meant I had less practice than Adam when he bumped into Eve. As we assaulted the mountains, instead of belting over them in flat-foot style I kept the throttle as rock-steady as possible and even backed off a hair or two when I felt my manifold vacuum was dropping to a point where I'd be pulling on the high-speed jets of the carburetor. On some of these mountain peaks my speed would drop to as low as 30 mph but I was careful to [*Continued on page* 162]

**WHISTLING TOASTER** to tell Mom (who is hunting for Junior's Cub cap) the toast is done. Sondra Golias, Niagara Falls, N. Y.

**BOTTOMLESS BARROW** with interchangeable plates—one being a screen for sifting sand or ashes. M. M. Carey, New Castle, Pa.

# INVENTIONS WANTED!

Is there a gadget you think should be invented? If so, send its description to Inventions Wanted Editor, MECHANIX ILLUSTRATED, 67 West 44 St., N.Y. 36, N.Y. Each one printed will be awarded $5.

**EGG PEELER** for hard-boiled enthusiasts, egg devilers, delicatessens, to speed up egg processing. Polly Towne, Colchester, Conn.

**TELLTALE BALLPOINT** that changes ink color in time to warn the user that a refill is needed. James Vigliono, West Haven, Conn.

**CONVERSION KIT** for converting present vertical-shaft lawn mower mill into an out board motor. Vincent Pombo, Swainton, N. Y.

nge-
ifting
e, Pa.

usicists,
up egg
, Conn.

presen
an out
on, N. Y

strate

OPERATING EQUALLY AND ALIKE FOR THE GOOD AND WELFARE OF THE PUBLIC, ALL INDUSTRY AND OUR OWN NATIONAL ECONOMY

IMI

If you have an idea — a practical and useful idea —
an idea for improving, producing or saving anything —
an idea for new uses — or for something new and useful —

**Don't Sit On It! SELL IT!**

Ideas — whether mere ideas or inventions — have a value
the simplest ideas — *that save time, effort,* or *money* — or that
*produce markets, customers, consumers* — have value! Don't waste them!
Industry and investment capital need new ideas!

**YOUR IDEAS!**

They want to and will buy them — big and small — when
priority of origin is certified — and the Idea Marketing Institute is
your instrument for establishing priority and selling your idea.

**SELL YOURS!**

The Idea Marketing Institute is a public service enterprise founded to help you and protect you, founded (1) to assure you protection of and the promptest possible sale of your ideas of value at a full and fair price, (2) to make available to industry a means for the knowledge of and purchase of millions of ideas that otherwise never come to the attention of its directorates and (3) to benefit our own National economy by accelerating improvement, advancement, new products and new business toward constant betterment of our way of life and increase of the public purchasing power.

The I. M. I. exists for you. Use it.
If you have an idea —

**Don't Sit On It! SELL IT!**

Write today for full information as to how the
Idea Marketing Institute *helps you.*

# IDEA MARKETING INSTITUTE

The facilities of the I.M.I. are open to everyone. If you have special problems address your communication to

*Staff Offices*
**IDEA MARKETING INSTITUTE**
U. D. N. Bank Building
Upper Darby, Pennsylvania

Mail this coupon or a postcard today—

Registry Division FA
Idea Marketing Institute
P. O. Box 8046, Philadelphia 1, Penna.

Rush the I. M. I. Information booklet to:

Name _____
Address _____
City _____ Zone _____ State _____

# 1880 SUPERMARKET

LOCK, stock and old barrels, Mrs. Mary Kidd of Walden, N. Y. has created an early American general store. Spurred on by a love of collecting antiques, Mrs. Kidd, with the aid of her husband, began putting her 1880 country store together. The little two-story building, once a barn and carriage house, sits behind her home. It is stocked with everything from fine herbs to horse collars, with a post office in one corner lighted by old oil lamps. Visitors flock to visit this bit of old Americana and discuss its charm around the ancient pot-bellied stove. •

VISITOR'S first view is panel glass window and cobbler's boot above the entrance, at right. Old-time pot-bellied stove and the checkerboard over a barrel recalls fond memories of the 1880s, far right. Note the spittoon, located for the easy convenience of the checker players.

ANCIENT garden tools and culinary instruments of long ago, at right. Posters touted products. Clothing and canned goods, canisters filled with perishable food, even straw hats and eggs were some of the many products stocked in the supermarket so mom could shop with ease.

POST OFFICE had series of glass-backed pigeon holes that held mail, right. Proprietor was also the postmaster in many communities. Pair of long johns are hanging on line, far right, and selection of hats for gentlemen of the period were prominently displayed in the spacious front window.

# GET HI-FI OUT OF YOUR TV SET

***This speaker unit achieves sound reproduction you never thought possible from table-model TV.***

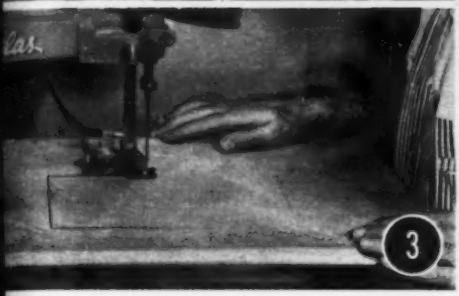
**By R. J. Capotosto**

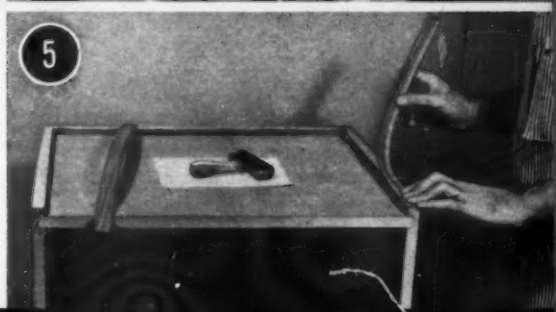
"HEY, turn up the TV . . . Grandma can't hear it."
"Don't you dare! I just got the baby to sleep."
"Leave it alone . . . it sounds tinny enough as it is."

If these complaints are typical of the TV tug of war in your home, then you and your family are ready prospects for hi-fi TV.

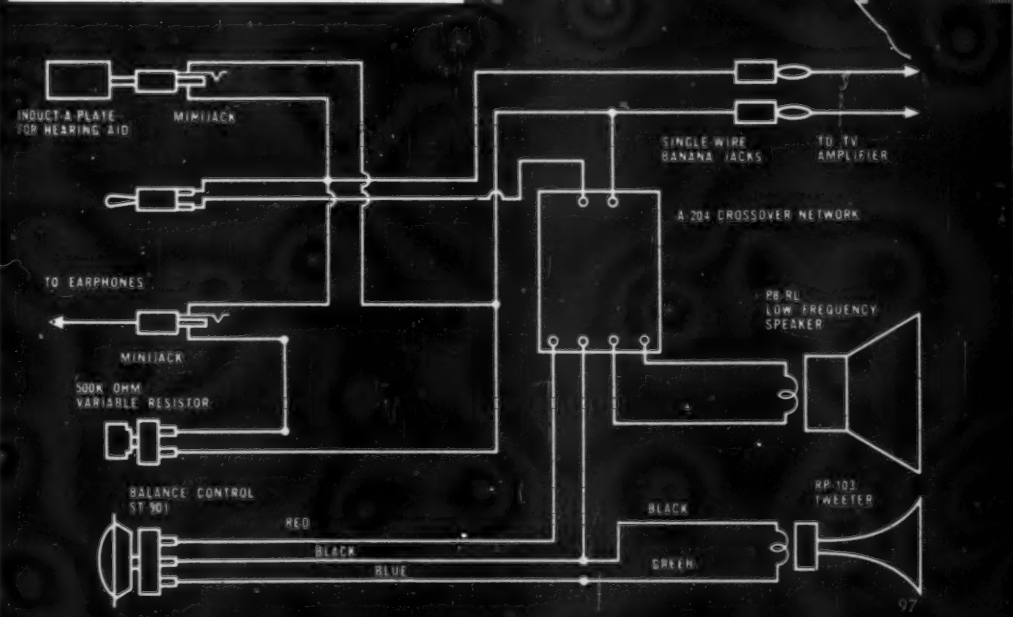
Would you like a speaker enclosure that serves as a table for your TV set? That includes a tone control for the speakers? That has an outlet for earphones and another for an induction plate (left) to be used in conjunction with a hearing aid by hard of hearing persons? You would? Then here's the unit for you!

Most table model television sets have small four- or five-inch speakers that cannot reproduce the full-





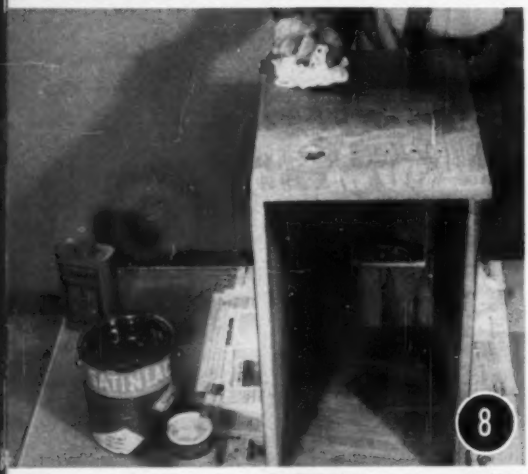

**1. Rip all pieces to size on circular saw. 2. Use a jointer to rabbet side and rear panels. 3. Trap door drop-out is shaped on the jig saw. 4. Assemble unit with white glue and let dry for 24 hours. 5. Cover all exposed edges with matching veneer strips.**



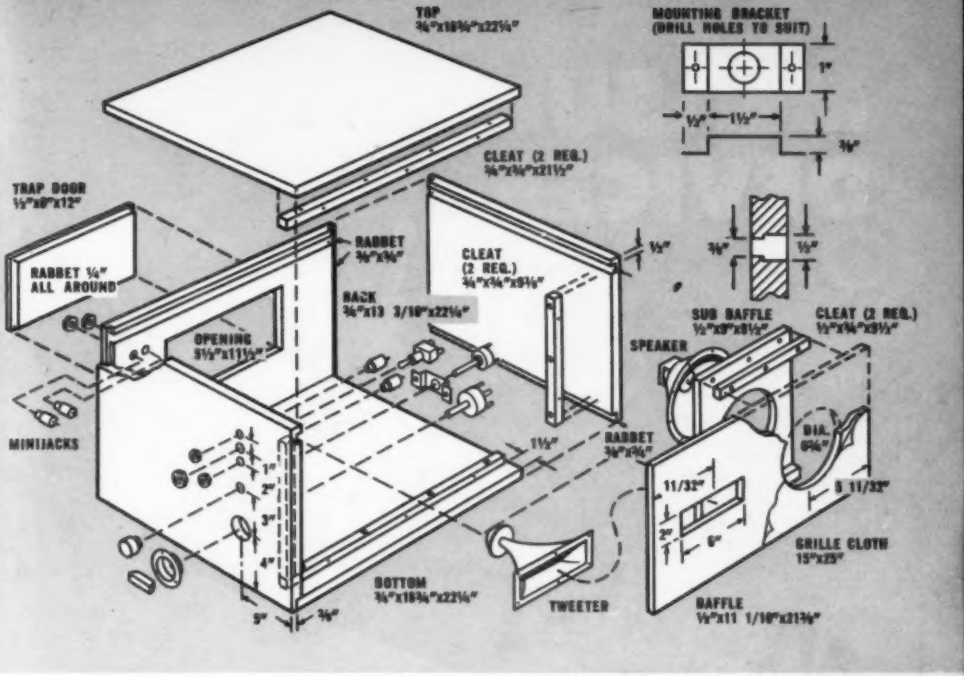
frequency range. To overcome this lack of fidelity, this unit uses two separate loud-speakers. The low-frequency speaker reproduces the frequency range up to about 3000 cycles. This end of the music spectrum has the greatest power, body and depth. Above this range the signal is channeled to the high-frequency horn-type speaker that makes music sparkle.

In the unit described, a Jensen eight-inch P8-RL low-frequency speaker and RP-103 tweeter are used with a crossover network. These units may be purchased in kit form with a coupling capacitor in place of the crossover network, although the latter offers better overall response and efficiency. The jacks, plug, switch and resistor are standard items. A variable resistor connected in series controls the volume of the earphones independent of the TV set.

In this case durable ¾-inch walnut was used for the enclosure because it matched existing furniture.



**6. Drill control holes carefully to avoid splitting wood. 7. Baffle-support cleats are attached with flathead wood screws. 8. For a pickled walnut finish, coat cabinet with white Firzite, then rub with rag dipped in clear lacquer. 9. Staple grille cloth in place, then attach sub-baffle and cleats. 10. Jensen KDV-10 speaker kit with coupling capacitor. 11. Variable resistor is held in place with a mounting bracket. 12. Induct-a-plate plugs into top jack. 13. All wiring connections are soldered. 14. Tighten speaker screws equally to keep wood from warping. 15. Note accessibility of installations through the rear opening.**

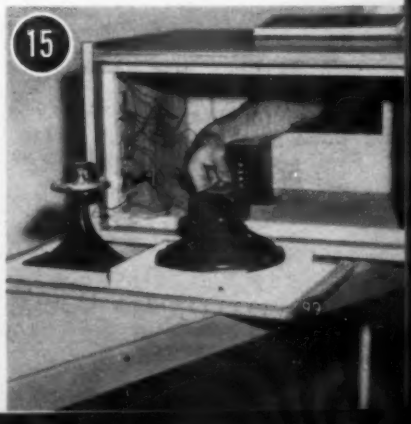



Cut all pieces to size on the circular saw. You may have to alter the dimensions slightly to fit your set. Before cutting the dadoes in the side and rear panels, make a trial cut on scrap to be sure of a snug, accurate fit. The rabbetted joints at the rear and bottom are made on the jointer. The trap door in the rear panel is cut out on the jig saw.

Now join all pieces together with glue and clamp securely. When glue dries, remove clamps and apply veneer edging to all exposed edges. Drill the holes for the controls and screw the cleats into place. Keep the grille cloth taut while stapling into place.

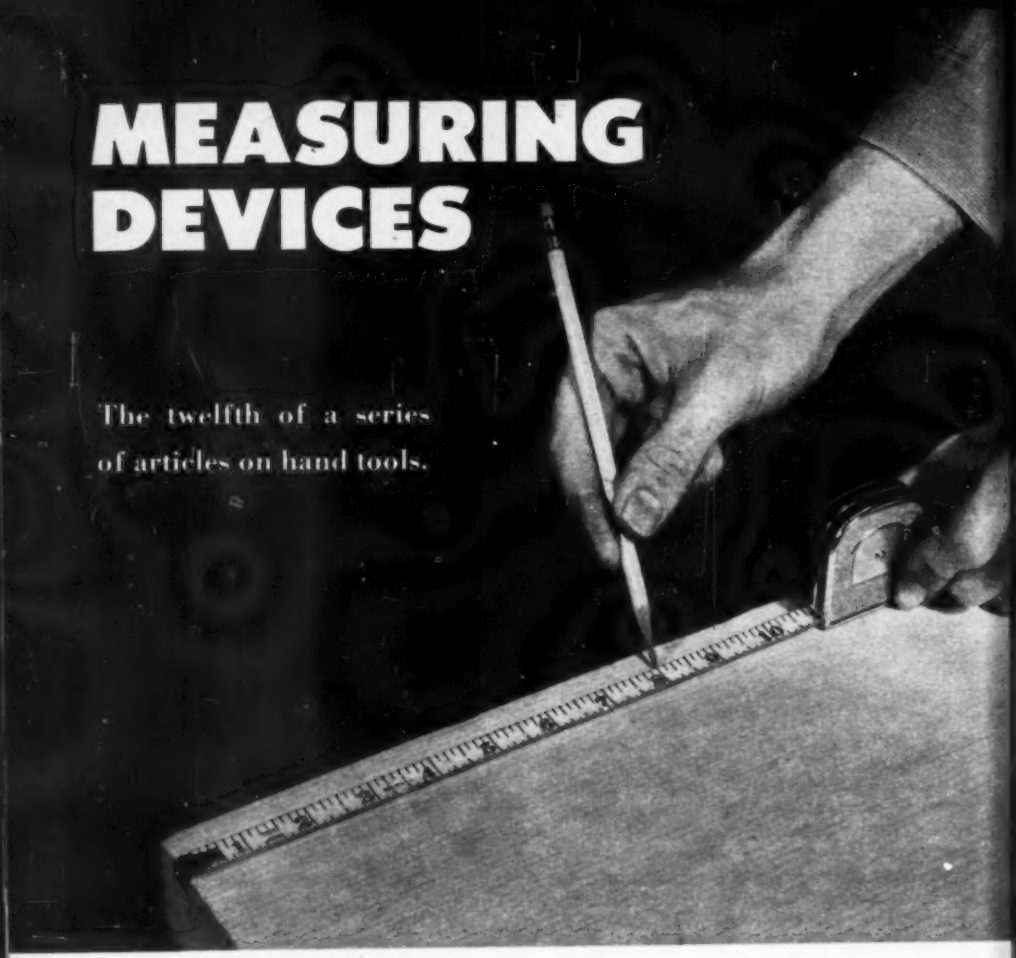
Cleats and sub-baffle are now joined and the various components installed. The crossover network should be placed toward the rear of the cabinet to clear the horn speaker.

When wiring, follow the detailed schematic that comes with the kit. The baffle board is placed into position and screwed to the cleats through the rear trap door. [*Continued on page* 132]

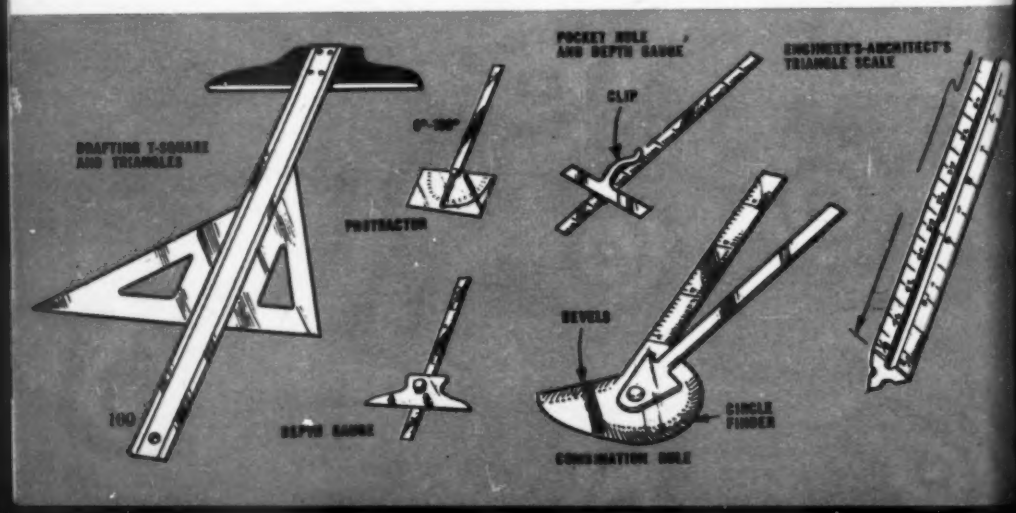


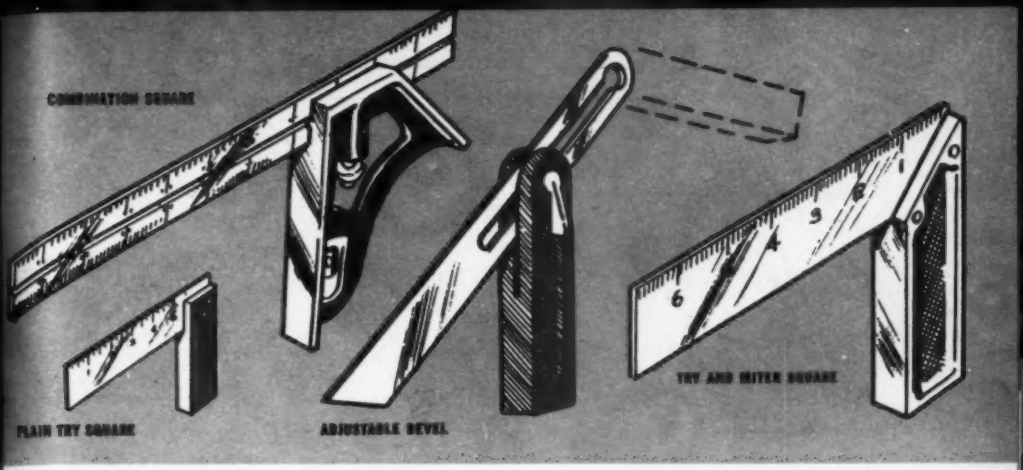
# MEASURING DEVICES

The twelfth of a series of articles on hand tools.



**FLEXIBLE STEEL TAPES** are among the most popular measuring devices in use today.



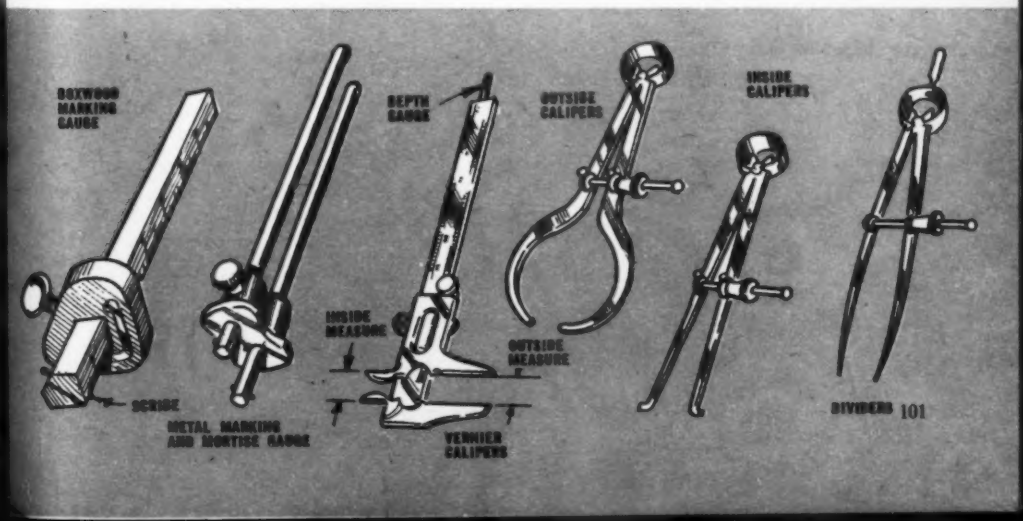


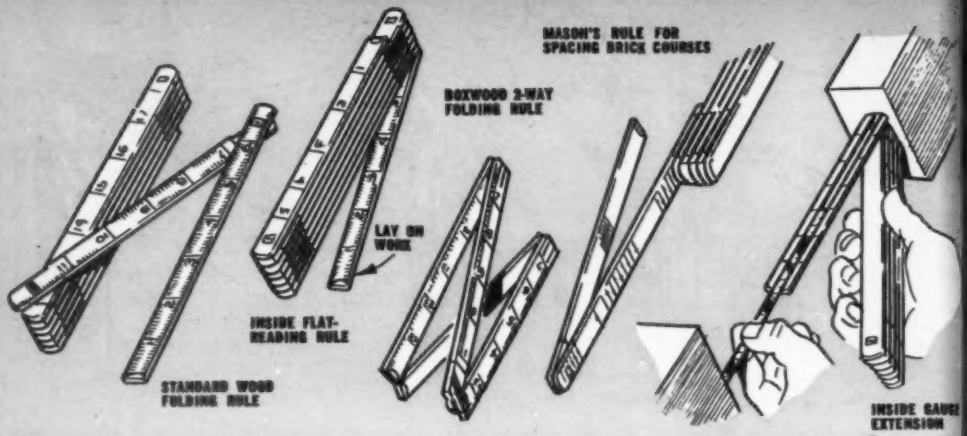

MAN'S desire to measure objects dates back to prehistoric times. Originally the limbs of the body were used as units. Probably the tribal chief's foot became the foot unit; the diameter of his thumb, the inch; the distance between the ends of his extended thumb and little finger, the span (9 inches); and the distance from the tip of his elbow to the tip of his middle finger, the cubit (18 inches).

Through the centuries measuring systems and devices have been developed to a high degree of accuracy. While this development has often been helped by such influences as government edicts, it has also been hindered by the natural reluctance of governments to alter the long-established measuring habits of a nation. So it is that the Imperial Yard, introduced to the United States by the British in 1856, has never been legalized although it is in common use. Conversely, the brilliant French metric system became our legal standard of measure by an act of Congress in 1866. Unfortunately, no enforcement provisions were written into this act. The result has been that "custom and usage" has prevailed to belabor Americans under the outmoded foot-pound-gallon "system" still in use today.

Regardless of the system or standard used, measurement falls into three classes: line, angular and end. For line measurement, tapes, rules and scales are used; for end measurement, calipers; and for angular measurement, squares and protractors.

Among the most popular rules used by mechanics and carpenters are the hinged rules, zigzag rules, bench rules,






steel and cloth tapes and yard sticks.

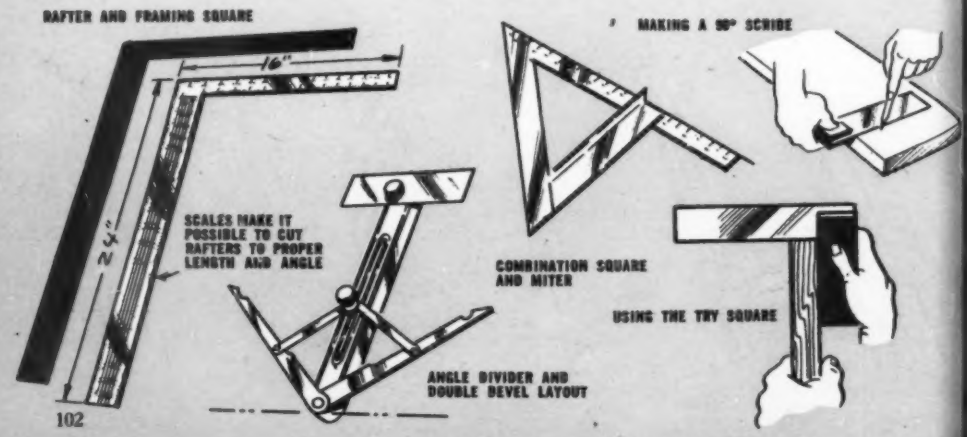
**The hinged rule** is usually two or three feet when extended and is made with four folds. One side is marked in eighths of an inch, the other in sixteenths. It is made of boxwood edged with brass. This rule can be used as a gauge when marking lines parallel to the edge of a piece of lumber. It can also be used to mark off stock into equal or proportional parts. To divide the width of a board into any number of parts, put the tip of the rule on one edge of the board and, by slanting, have the number corresponding to the desired parts intersect the other edge. Mark dots at each number and draw parallel lines along the board to obtain the number of equal divisions desired.

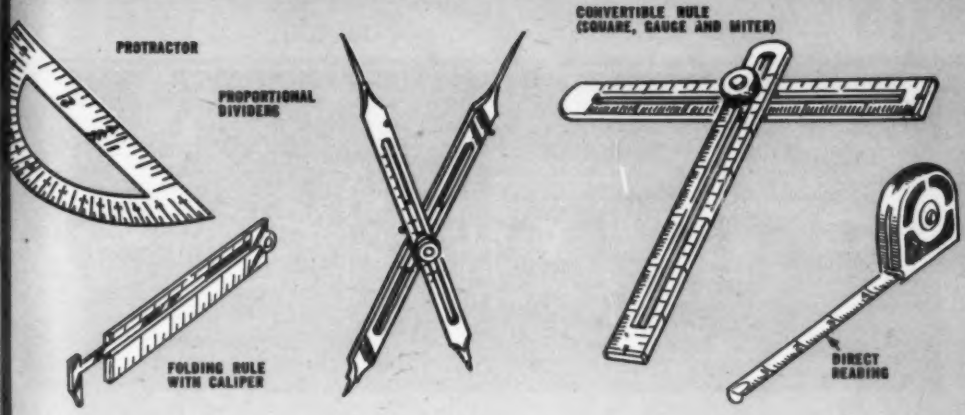
**A zigzag rule** makes long or short measurements. It can be extended to a six-foot length and then folded down to six inches. Zigzag rules are made either of wood or metal and are graduated in eighths and sixteenths of an inch. Certain zigzags have a graduation system of tenths and hundredths of a foot on one side, inches on the other. The bricklayer's zigzag has a brick-spacing scale on one side.

**A zigzag extension rule** is handy for taking inside measurements on door and window openings. Its seven- or eight-inch brass extension slide is removable and can be used to measure the depths of holes.

**Caliper rules** measure drill-hole diameters and board thicknesses with a high degree of accuracy. Some are made for both inside and outside measurements.

**The differential rule** used in machine






shops is extremely accurate. This is a steel rule with a peculiar system of graduations at one end. Through a combination of nine lines and a slanting row of dots, measurements to thousandths of an inch can be made quickly. When using this rule dividers are usually employed to lay off or take up dimensions. The dimension is taken with inside or outside calipers and then transferred to the rule for reading.

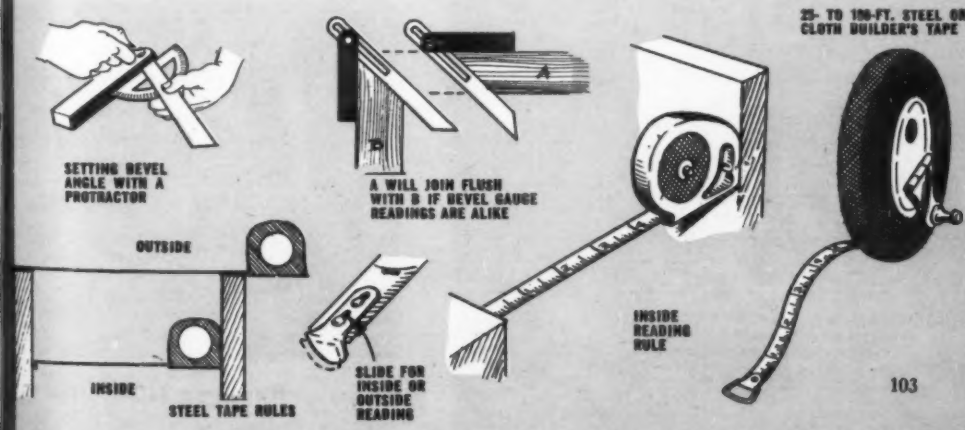
**The bench rule** is the most common measuring "stick" in use today. It is as likely to be found in a second-grader's school desk as on the bench of a cabinet maker. It is usually one foot long although some craftsmen prefer the 18-inch length. Bench rules may be of wood, plastic or metal.

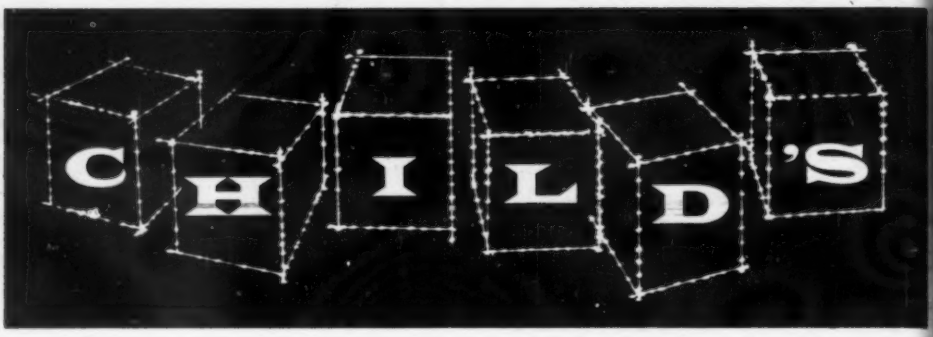
**Tapes** of flexible steel or reinforced cloth are used on jobs requiring long measurements. They come in lengths of four to 100 feet and are graduated in feet and inches or in tenths of a foot. All tapes feed from spools, some of which incorporate an automatic rewinding device. Cloth tapes are not recommended for precision measuring tasks as they tend to stretch when wet.

Always check the zero point of any tape before measuring. Keep metal rules and tapes lightly oiled to prevent rust and wipe them clean after use.

**Squares** are used to measure angles, the accuracy of which determine tight jointing jobs. The three most common squares in use today are the framing—or rafter—square, the try square and the bevel square.

**The steel framing square's** two arms form a right angle. The larger 24-inch arm is called [*Continued on page* 132]



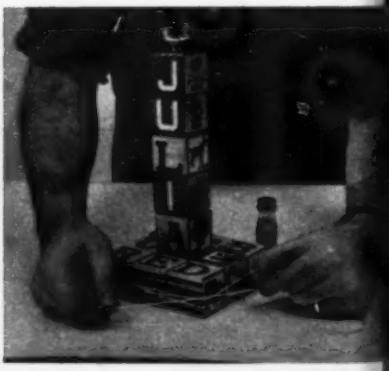



# LAMP

WANT to delight your child with a personalized lamp that not only illuminates but instructs and entertains as well? It's as simple as ABC to build and as cheerful looking as the alphabet blocks that compose it. And you'll undoubtedly want to build it to spell out your youngster's name.

Begin by marking the centers of the lamp post blocks. Drill ⅜-inch holes through these and then stack the blocks on a length of ⅜-inch threaded pipe as shown in the diagram. Line up the letters

**BASE BLOCKS are glued together and bound with twine until glue has set.**



**MARK the centers of the lamp post blocks before boring the holes with a ⅜-inch drill.**

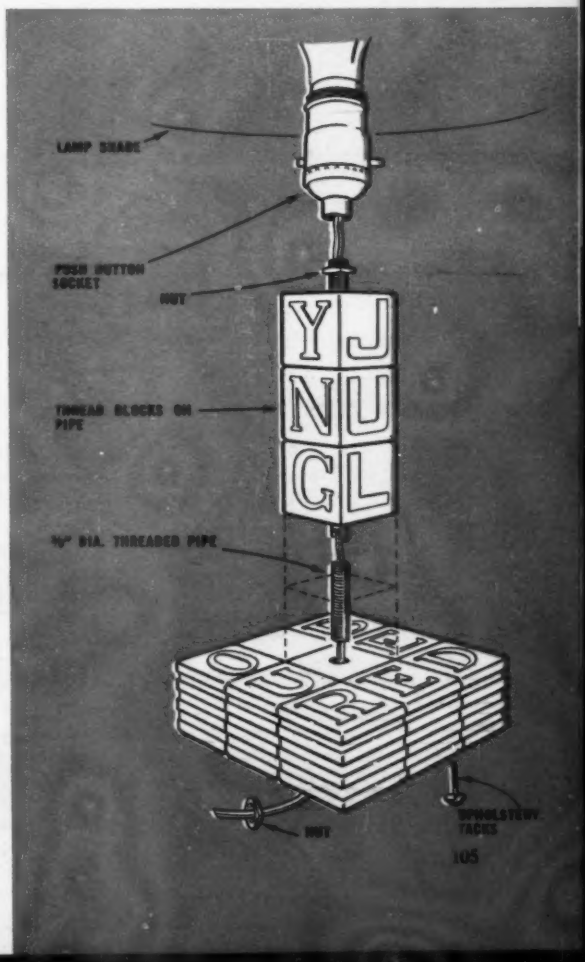
**LAMP BASE consists of eight blocks glued together around sides of bottom post block.**

to form the desired name or design before tightening the assembly with nuts threaded over the pipe ends.

Glue the remaining blocks together around the bottom block of the post and bind together tightly with cord until the glue sets.

Now thread the lamp wire through the post pipe and connect it to the light fixture. Screw the fixture in place, put in a bulb, cap it with a shade—and there's a lamp to put a song in the heart of any child.—*Dick Howe*

**LIGHT FIXTURE is wired and then turned onto threaded lamp post pipe.**



# HALF BASKET

***Half a basket is better than none—and it may be handier and less in the way than a "whole" one.***

**By Clarence Martin**

THIS wastebasket is a practical and attractive project designed for use in either home or office. Its flat back is a space-saving feature that permits the basket to be placed flush against wall or desk. The natural color of the Masonite Leatherwood used in construction will blend harmoniously with any decor. And the Half Basket's simplified design and negligible cost make it an ideal project for the do-it-yourself beginner.

Your first step will be to cut a piece of ⅛x15x21½-inch Masonite Leatherwood and soak it in water overnight.

Next, form a 12-inch disk from ¾-inch scrap stock, then saw it in half. Use wood screws to secure one piece to the center of the top edge of the Masonite, the other to the bottom edge.

Now bend the wet Masonite around the half disks and tie it in place with rope or webbing. A piece of 12x15-inch Leatherwood is now cut for the back.

Cut the two corner pieces of 1¼x15-inch perforated aluminum to size and bend to right angles. Bore through the Masonite with a No. 29 drill at points near the top, bottom and center of each side. After threading these holes with an 8x32 tap, secure the angles in place with $\frac{3}{16}$-inch, 8x32 aluminum machine screws. The back is then joined to the half-round section of the basket in the same manner.

Two pieces of ⅛-inch Leatherwood are now cut to the shape of the basket's bottom and glued together.

Using your No. 29 drill, bore three holes into this bottom piece —two through the back and one through the front where shown in the diagram. Now tap the holes in the bottom piece for 8/32 threads. Enlarge the remaining holes with a No. 18 drill and fasten the bottom piece in place with machine screws.

You can now cut the two ⅝x23-in. strips of aluminum which are fastened around the curved front of the basket with machine screws through holes tapped as before.

Two more of these strips are now cut and fastened in place across the top and bottom of the back.

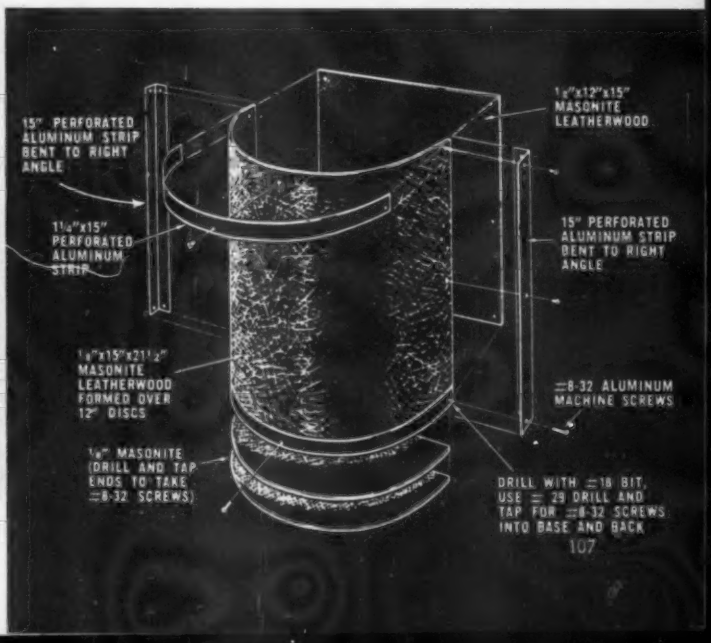
Finally, nail three rubber-head tacks into the bottom piece to prevent scratching.

Your basket and (we hope) your satisfaction with it, are now complete. •

**1. LEATHERWOOD soaked overnight in water is bent around wood frames.**

**2. HAND DRILL, hammer, screwdriver and saw are the only tools required.**

**3. RUBBER HEAD tacks nailed into bottom piece will prevent scratching.**



# HANDY TIPS

**FUEL OR WATER TANK** can be repaired with epoxy resin and Fiberglas. Top, leaks along bottom of tank are circled. Lower left, area is sanded clean to bare metal. Right, Fiberglas cloth is pressed smooth in coat of wet resin. To complete job, second coat of resin is brushed on after first cures. Total cost? $10. Tank was drained and disconnected for work.

**FREDDIE FUMBLES**

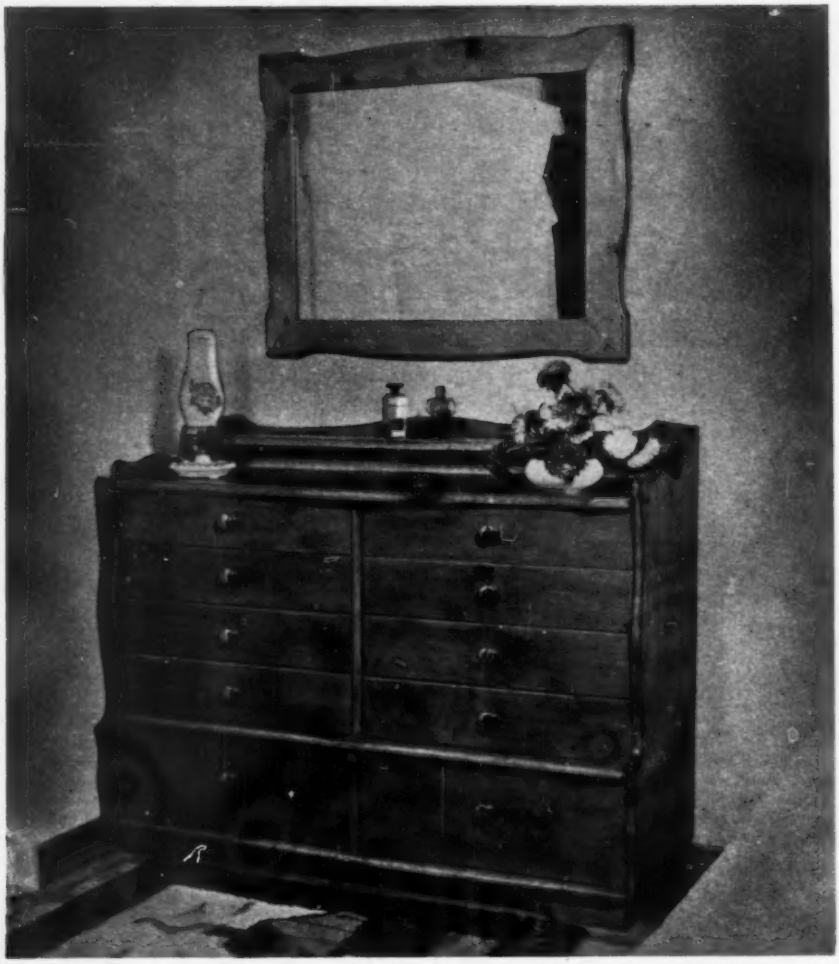
**GUTTER SUPPORTS** are fine ladder brackets when nailed to garage studs as shown.

**FELT DISK** beneath sewing machine spool prevents free spinning, protects finish.

**HAND HOLDS** make it easy to carry carton: cut U in each side and depress tabs.

Send Freddie Fumbles your idea of a good short-cut, time-saver or safety device in your work, whether it be in the home, shop, office or farm. Each tip accepted will be paid for at the rate of $10. Naturally we cannot acknowledge or return the ones we cannot use. However all will be carefully read and evaluated. (Those which we can use in other departments of MI will be paid for at our regular rates.) Please send in your ideas on a post card only. Address to Freddie Fumbles, *Mechanix Illustrated*, 67 W. 44th St., New York 36, N. Y.

# Early American CHEST



***This handsome chest was designed especially for amateur home craftsmen.***

**By R. J. De Cristoforo**

TAKE a popular furniture design, plan the simplest possible construction, provide for a warm and mellow finish—and you have the perfect home craftsman's project. Our Early American Chest evolved from this recipe—it's easy to make and a pleasure to own.

Ponderosa knotty pine was used in the

original but the new plywood panels, faced with clean knotty pine, can be substituted if you want to avoid the job of gluing up boards. If you buy the solid stock, ask your lumber dealer to let you select what you'll need. Then you can be sure of clean, straight boards with solid knots.

It's best to make the glued-up panels from boards three inches wide. Rip six-inch boards down the middle and invert alternate pieces to even the strain. Bore the pieces for dowels and coat the holes and mating edges with glue. Then put them in clamps and let them set for at least 24 hours. Be sure to wipe away excess glue with a damp cloth after the clamps have been tightened.

### Construction Hints

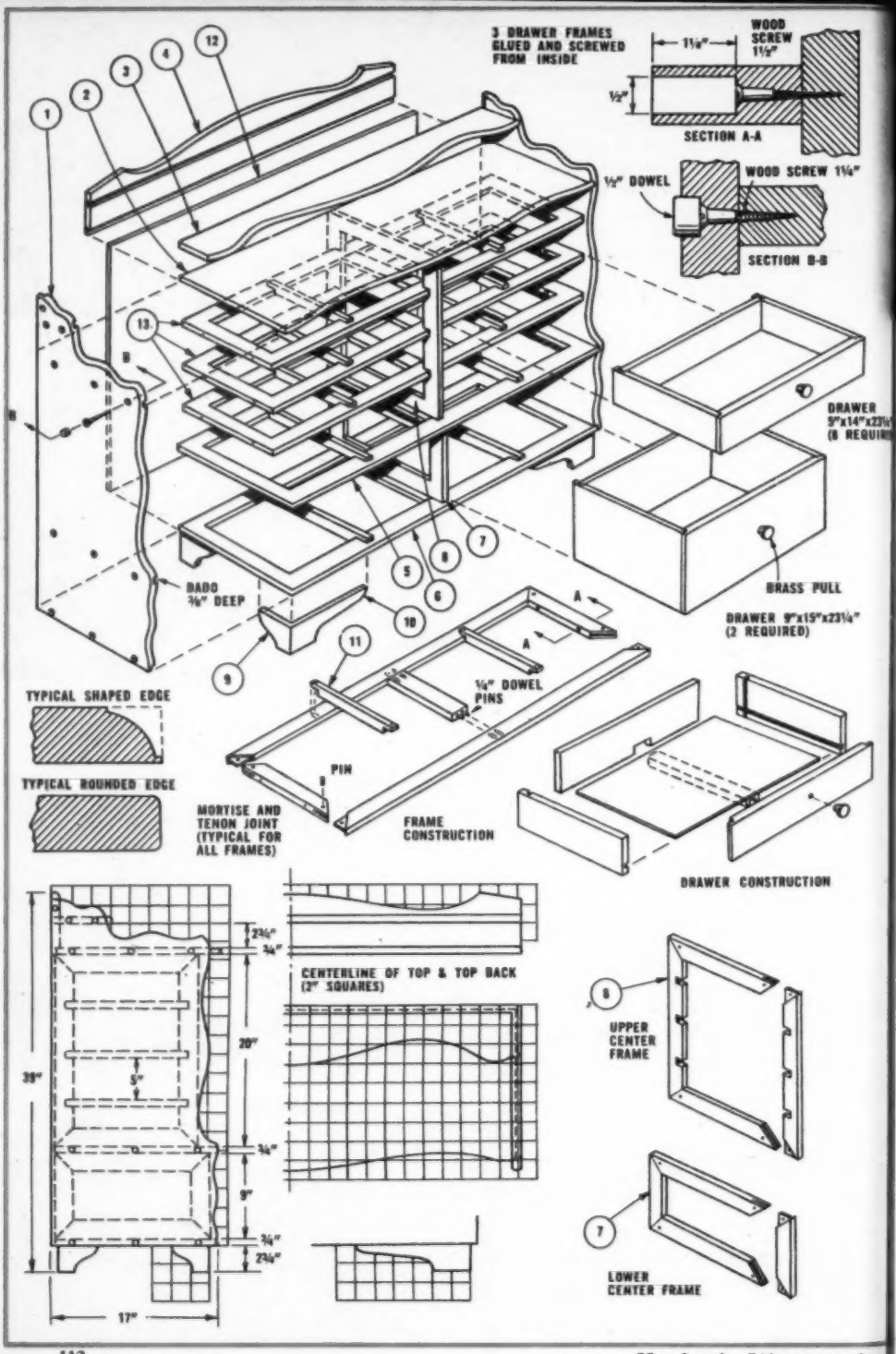
Cut the dadoes in the sides before you cut the curves. Lay out all curves full-size on plain wrapping paper by enlarging the squares which are shown on the drawing. Then transfer them to the wood. Curves can be cut on a band or jig saw or by hand with a coping saw. After sawing, sand them smooth. Shaped edges must be formed on a shaper or a similar setup on a drill press. If you lack this equipment, just skip the shaping and round off all edges. Use a rasp to do this and finish the job with sandpaper. Edges do not have to be perfect, but they should be very smooth. In fact, a little discrepancy here and there will add a look of age to the project.

**EDGES** of glued-up boards are shaped. If you lack shaper, you can round the edges.

**FRAMES** are made slightly oversize, then trimmed to the exact size after assembly.

**DADOES** (above, right) are cut by using dado assembly on table saw. Same tool is used to cut rabbets.

**BAR CLAMPS** are used in assembly. Put scrap wood under jaws and be sure to square clamped parts.


3 DRAWER FRAMES GLUED AND SCREWED FROM INSIDE
WOOD SCREW 1½"
1⅛"
½"
SECTION A-A
½" DOWEL
WOOD SCREW 1¼"
SECTION B-B
DRAWER 9"x14"x23¼" (8 REQUIRED)
BRASS PULL
DRAWER 9"x15"x23¼" (2 REQUIRED)
DADO ⅜" DEEP
¼" DOWEL PINS
PIN
MORTISE AND TENON JOINT (TYPICAL FOR ALL FRAMES)
FRAME CONSTRUCTION
DRAWER CONSTRUCTION
TYPICAL SHAPED EDGE
TYPICAL ROUNDED EDGE
CENTERLINE OF TOP & TOP BACK (2" SQUARES)
UPPER CENTER FRAME
LOWER CENTER FRAME
39"
17"
20"
5"
9"
23¼"
¾"

**WOOD SCREWS** are driven in after piece has been clamped tight with ample glue in joints.

**CENTER STRIP** acts as drawer guide while framework supports the weight.

When parts 1, 2, 3, 4, 5 and 6 are complete, assemble them with glue and screws. Be sure to counterbore holes for the screw heads so they may be concealed with short dowel plugs. These are glued in place, projecting slightly for a decorative effect, or sanded flush with the surface of the wood.

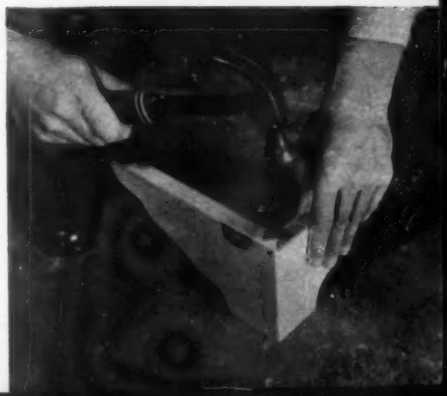
Now that the body of the chest is made and assembled you can make the center frames and drawer frames. Since you have the assembled chest to work with, check dimensions frequently against the chest itself so you can compensate for any little discrepancy.

The lower center frame is put in place on its own, but be sure to insert the drawer frames in the upper center frame before you put this in place. Drawer slides too, can be attached before installation of the frames. All frames are attached with glue and screws driven through from the inside. The feet are attached with screws which are driven through from the underside.

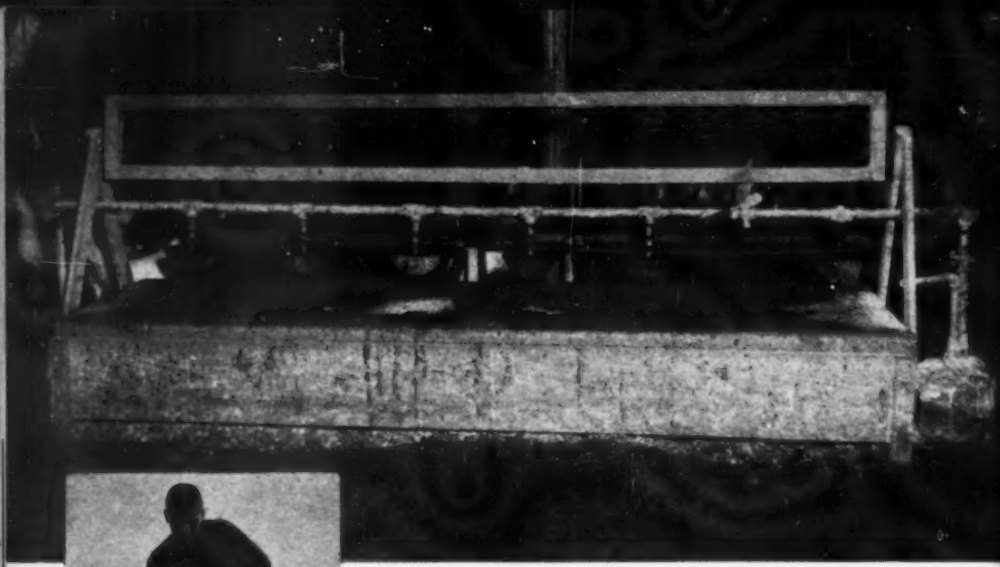
When making the drawers, cut all the fronts first and check these on the chest itself. Any necessary slight trimming is best done before the drawers are assembled. When you know the fronts fit right, then it's easy to make the remaining drawer parts to exactly the right size. Drill holes through the center of each drawer for the brass pulls, but do not attach these until after finishing. [*Continued on page* 134]

**DRAWER FRAMES** and the top center frame are assembled, then fitted in.

**GLUE AND SCREWS** secure drawer frames which are butted against the sides (above, right).



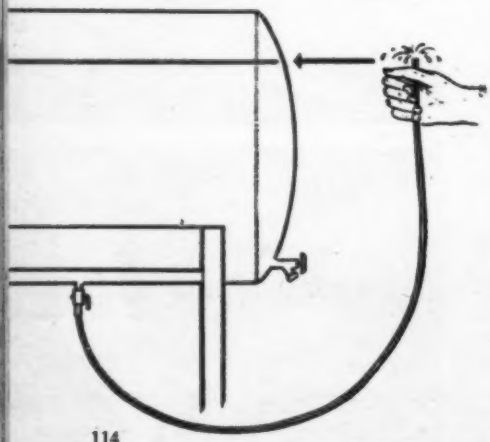
**FEET** are mitered and assembled with glue and corrugated fasteners, then screwed to the bottom.



MESH platform over drain tiles keeps floor dry near fountains in chicken house. SPIKES IN POST, left, protect a fence by making it easy for a hunter to cross.

# THE FARMER'S PAGE

SIMPLE GAUGE shows level of fuel in a storage tank: hose is held above level of tank and slowly lowered until flow starts.



BRAKE DRUMS from trucks make good animal feeders: they're too low and heavy to be tipped over and need little attention.

# FRESH PAINT TIPS

Dutch Boy Paint, Nat'l Lead Co., 111 Broadway, New York 6, N. Y.

**NEW OIL-BASE** paint has unusual property—the brush can be cleaned with turps or with soap and water.

**PAINT MIXER** fits any power drill; a second fitting cleans brushes by centrifugal force. Both items, $2.98.

Explorer Prod., Inc., P.O. Box 1958, Ops-Locks, Fla.

Royal-T Prod. Co., 811 Wyandotte St.
Kansas City 5, Missouri.

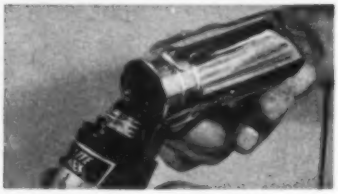
**PAINT APPLICATOR** with roller and paint reservoir can cover a wall without re-dipping. $2.98.

Wooster Brush Co., Wooster, Ohio.

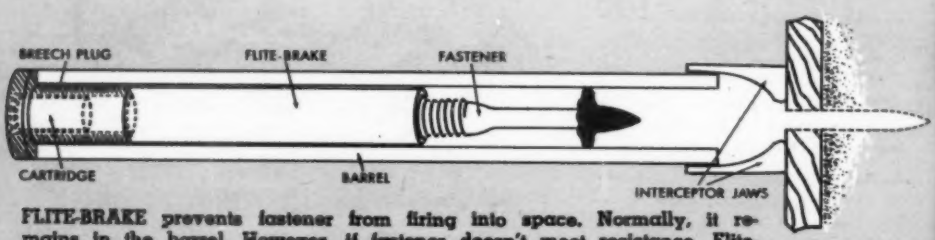
**DISPOSABLE** paint roller fits all standard 7-in. handles, does away with messy clean-up jobs.

# NEW TOOLS DRIVE NAILS INTO CONCRETE

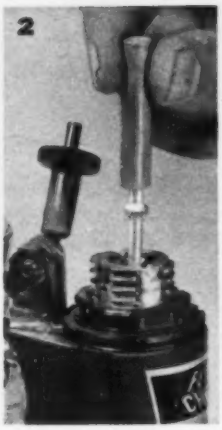
**FLITE-CHEK powder-actuated tool is opened for loading by a ⅛th counterclockwise turn of handle.**



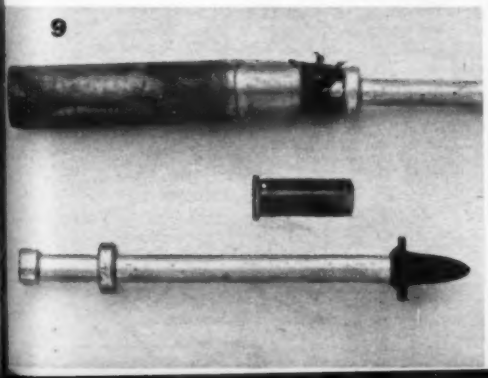
TWO new tools make it easy for a home craftsman to drive specially hardened nails and studs into wood, thin steel, cinder block or concrete. In one, the Flite-Chek Jobmaster, a powder charge propels the fastener. Designed so that the fastener can't be ejected if the tool isn't perpendicular to a surface or if no solid resistance is met, this tool is sold or rented at hardware supply houses. The other tool is called Shure-Set and sells for $7.95. With it, a 2½-lb. hammer is used to drive the fastener. •




**FLITE-BRAKE prevents fastener from firing into space. Normally, it remains in the barrel. However, if fastener doesn't meet resistance, Flite-Brake enters tapered area of jaws and is squeezed onto fastener threads.**



**FASTENER** goes into barrel (1) and the Flite-Brake is slipped over it (2). Next, breech plug is inserted (3) and cartridge follows (4). If indicator appears (5) the tool isn't perpendicular and cannot fire. Breech plug is slipped over extractor (6) to remove a spent cartridge. Interceptor jaws grip Flite-Brake if firing is faulty (7) and tap releases them (8). Improperly fired fastener is held by Flite-Brake (9). Fastener is inserted in end of Shure-Set tool (10) and driven by solid blows to secure plate (11).



# MAGNETS AROUND THE HOUSE

**IRON hardware is easily separated from aluminum, brass or copper with a magnet.**

**TEST hardware that appears to be brass: attraction means it's iron and will rust.**

**MEMO on refrigerator door hardly can be overlooked: small magnets leave no marks.**

A COLLECTION of small Alnico magnets is a definite asset around the home or shop. An alloy of aluminum, nickel and cobalt, the initial letters of which give the name, Alnico is many times more powerful by weight than the old-fashioned horseshoe magnets of common steel.

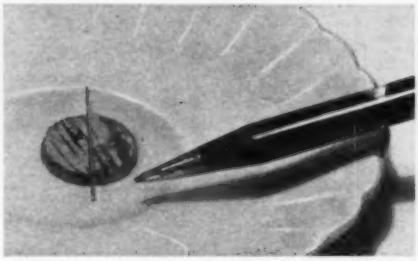
Available in many sizes and shapes,

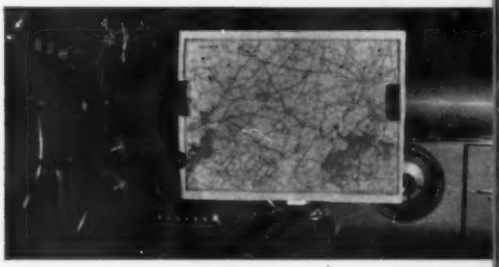
## *Powerful Alnico magnets make low-cost implements and toys.*

**By Robert Hertzberg**

**SCREW DRIVER is easily magnetized when rubbed in only one direction with magnet.**

**MAGNETIZED screw driver can be used to pick up screws and other small hardware.**





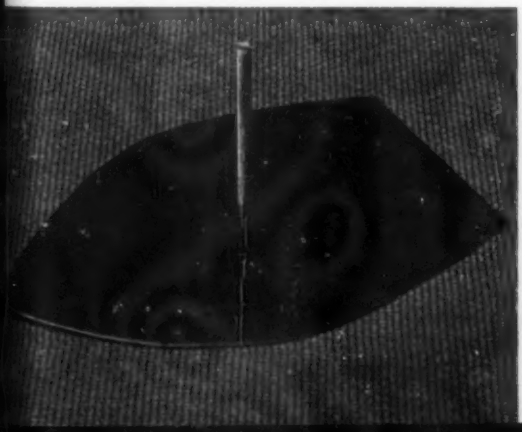
the most useful Alnicos are U-shaped and range from three-quarters of an inch to two inches across. Small cylinders up to a half-inch long are suitable only for light holding purposes since a pull can be exerted by only one end.

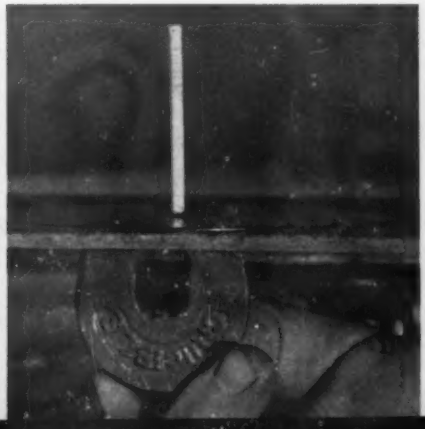
The illustrations show some interesting applications of magnets and many others will suggest themselves. •

**NEEDLE, magnetized and laid on floating cork disk, becomes a north-south compass.**

**WHEN DRIVING, map can be stuck to the dashboard, leaving both hands for wheel.**

**TOY BOAT mystifies and amuses children for hours: cut from thin sheet iron, it's moved on table or board by magnet beneath.**



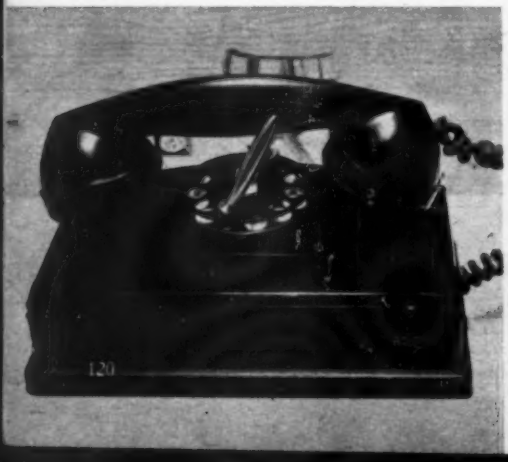


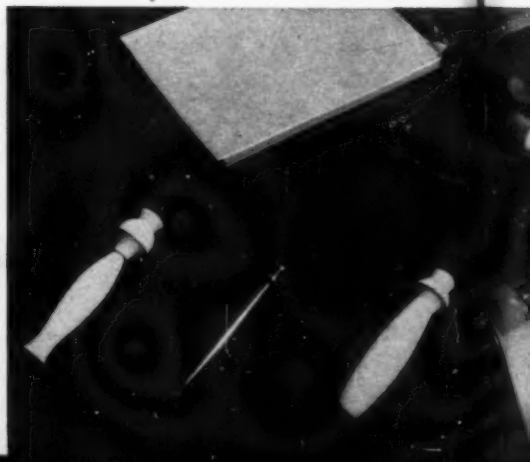
*Make It...*

# TELEPHONE DIALER

**REVERSE TAPER** of dialer allows it to rest easily in dial when not being used.

**THESE DIALERS** of varying designs were all made from plans illustrated at right.





HERE'S a fingernail-saving gadget that will be as helpful to the telephoning executive as it will be appreciated by every manicure-conscious housewife and secretary.

Making a telephone dialer is a one-evening project that requires a lathe and a set of turning tools. The dialer can be turned either from nonferrous metals, such as aluminum, copper or brass, or from any fine-grained hardwood.

Your first step will be to make a full-size reverse profile template from one of the designs in the diagram at right. This will be used as a check pattern when you're doing the turning.

There is nothing to prevent you from modifying the finger grip portion of the dialer to suit yourself, but the dimensions of the dialing end should be reproduced exactly.

You will notice that the reverse taper of the dialer allows it to be moved quickly from hole to hole. It also prevents its scraping the dial base and lets it hook to the phone when not in use.

Be sure to complete the turning and polishing of the dialer before cutting it off. Then only the ends will remain to be touched up by hand with sandpaper or emery cloth.

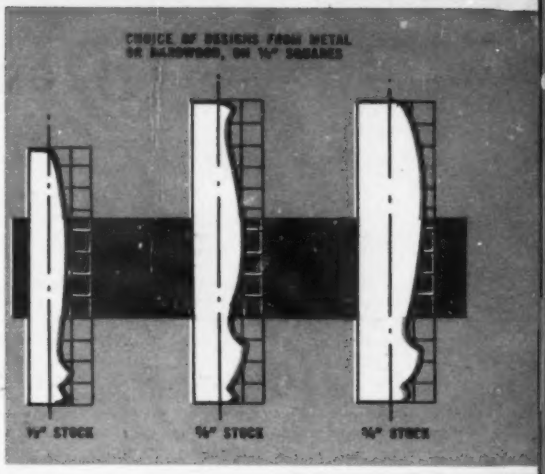
When working with metal, the job may be speeded by using files to help form the basic shape of the dialer; the final shaping is done with carbide tipped tools.

To finish, work down through progressively finer grits of emery cloth (or sandpaper, if you're working with wood) until it is smooth enough to apply a fine grade of steel wool.

Use red jeweler's rouge and a buffing wheel to bring the metal up to its shiny best. Then spray on a thin coat of clear lacquer; this will help preserve and maintain the finish.

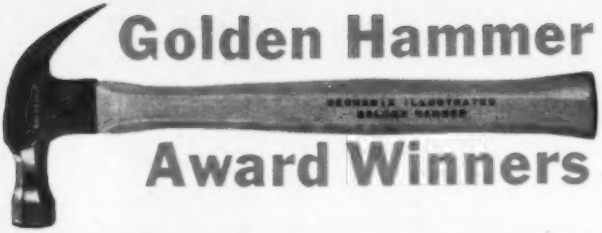
A telephone dialer is a rather small gadget and hence may occasionally be misplaced. You can solve this problem by drilling a small hole through the end of the handle and threading it with a length of ordinary key chain. Attach the other end of the chain to wall, desk or phone and your dialer will always be ready for use when needed.

—*R. J. DeCristoforo* •




**HARDWOOD STOCK** is quickly shaped to dialer contours on any fast-turning lathe.

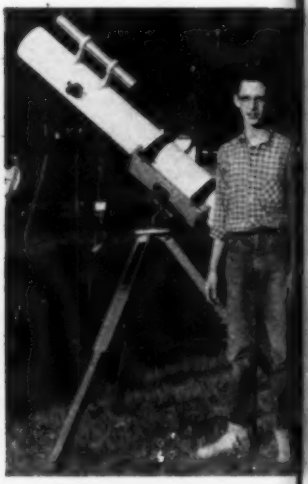
**CHUCK GRIPS** ½-inch brass stock to form dialer shown in photograph (upper left).




# Golden Hammer Award Winners

Each craftsman whose project is shown receives a 24-karat gold-plated Hammer and a Workbench Award Certificate. Runners-up will be sent a beautiful gold-plated Golden Hammer Tie Bar or MI's Certificate of Merit. How about sending us a *black-and-white* photo and *full* description of your latest project? Photos of you and your workshop are also eligible. Send all entries, with return postage enclosed, to MECHANIX ILLUSTRATED Golden Hammer Awards, 67 West 44th St., New York 36, N. Y. This month's Golden Hammer Winners have been selected from craftsmen who recently won top prizes in the nationwide Constantine Woodworking Awards Contest held to encourage woodworking hobbies.

BAR-B-QUE and patio were constructed by George Robertson, Phoenix, Ariz.—from his wheelchair! Note portable broiler.



TELESCOPE, built by Dennis Christenson of Cedar Rapids, Ia., has a 6-in. mirror, a 6-ft. tube, 108-power lens.

**The following craftsmen have been awarded GOLDEN HAMMER TIE BARS for their projects:** Ray O. Dare, Torrance, Calif.; Truls Nygaard, Norway, Europe; K. H. Kerns, Marion, Ohio; Wm. P. Wise, Bellevue, Ohio; John W. Sparks, Cincinnati, Ohio; Dewey M. Bagley, Jr., Van Nuys, Calif.; Roger G. Skillestad, Pekin, Ill.; Richard Stolzenfels, Bakersfield, Calif.; Blaine Sagers, Dubuque, Ia.; Fred C. Stebbins, Kansas City, Mo.; A. D. Criss, W. Hollywood, Fla.; Herbert Frankle, Springfield Gardens, N. Y.; E. J. Kilzer, Billings, Mont.; Robert Begin, Aruba, Netherlands Antilles; Edgar Reed, Shrewsbury, Mass.; Howard F. Lind, Medford, Ore.; John H. De Boe, Ketchikan, Alaska; R. M. Airis, Appleton, Wisc.; Eneel Klein, Mola, Okla.; Wilbur Reeves, Hollywood, Fla.; C. M. Wolfe, Black Mountain, N. C.; James A. Salzman, Appleton, Wisc.; Kenneth M. Fetters, [Continued on page 134]

MODEL is replica of Capt. Blood's ship. John Oakes, Minerva, N. Y., built her in 18 months. She's 15 in. long, has 44 guns.

HI-FI SET of African mahogany has 9-cu. ft. speaker compartment. It was custom-crafted by Errol Prince of Milwaukee, Wis.

WORKING MODELS of a steam engine and thresher show the meticulous craftsmanship of John A. Neumann, Wood Lake, Minn.

TRACTOR was built from a Crosley car by Le Roy Christ, Villa Park, Ill. Rear wheels are from a Ford. Total cost less than $80.

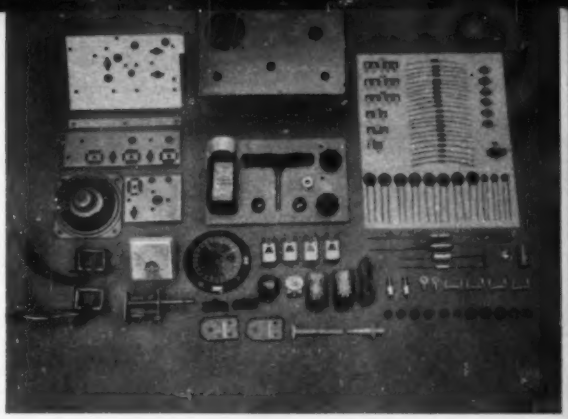
FISHERMAN, an 11½-ft. outboard, was built in 2 months from MI plans (slightly modified) by José Sixto, Salto, Uruguay.

# RADIO AND

ANTENNA
ANTENNA JACK
2N-352/6
2N-308
SENSITIVITY
COLORED DOT
BOTTOM VIEW OF ALL COILS
INDICATES CHASSIS GROUND

By John Michaels

EVEN if you never take your boat out of sight of land, there's a good chance of being enveloped in fog in a matter of minutes. That's when you can really appreciate the feeling of security a radio direction finder gives. Or how about a trip along the coast on which you're playing it by eye? After a while your judgment begins to fail and the next point doesn't look anything like the one it's supposed to be and your gas is running low. Then it's a great thing to be able to pinpoint your position and make a straight run for the nearest refueling station. Well, for $49.95, you can buy and assemble a kit which will

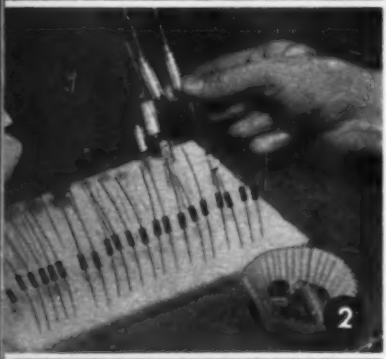


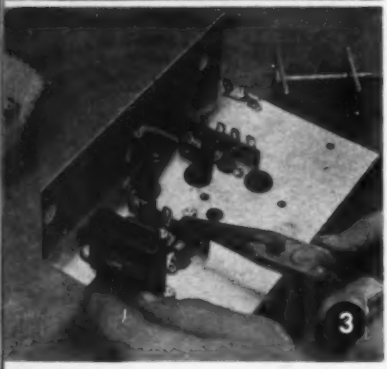
**SIMPLICITY of set is revealed in parts layout: novice should have no difficulty.**

**COMPACTNESS is achieved by use of six transistors shown compared to a cigarette.**

# DIRECTION FINDER

SCHEMATIC
TRANSISTOR RADIO DIRECTION FINDER





**ASSEMBLY is facilitated by wire stripping and cutting tool (1); resistors and capacitors are set up for selection in corrugated cardboard or a styrofoam sheet (2); leads are crimped to lugs with needle-nose pliers before soldering (3); steps are checked off in instructions (4); on-off and volume control is installed (5).**

save you a lot of worry and inconvenience—and perhaps your life.

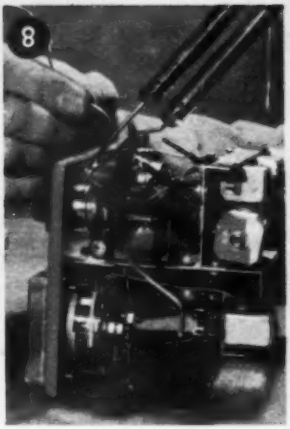
The Heathkit Transistor Radio Direction Finder, Model DF-1, weighs only three and a half pounds, contains six transistors in a superheterodyne circuit and is powered by a miniature nine-volt battery. Aside from its use as a radio compass, the set receives the broadcast band and serves as a fixed or portable radio. Using a directional loop, it will pinpoint any station within range and allow you to plot the bearings of two or three stations on a chart, indicating your exact position.

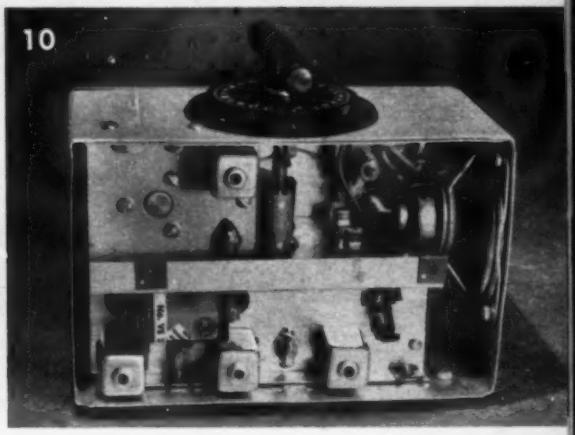
Well-designed, the set is easily assembled by following step-by-step instructions furnished with the kit. The tools required are a needle-nose pliers, small and regular screw drivers, wire strippers and a soldering gun or pencil (60-100 watts). Also, a coil of rosin core solder is needed.

The most important part to remember in assembling this or any radio is to employ good soldering technique. About 95 per cent of all failures in radio work may be [*Continued on page* 140]

**POSITION** of a boat in Lake Michigan is plotted from three known radio stations.

**THE ANGLE** between each station should be more than 30° to give an accurate fix.

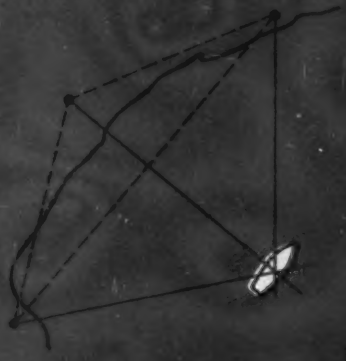




**NULL AND TUNING INDICATOR (6) has a molded plastic face and large, easy-to-read calibrations; spring clips (7) are provided to hold IF transformers firmly in place; soldering technique (8) is an important factor which is explained in the text. Completed set (9) is compact, sturdy and attractive, covers broadcast band from 540 to 1620 kilocycles; rear view (10) shows the single 9-volt battery which powers the set; clip for spare is at right.**

ON INLAND WATERS, fix is generally within triangle formed by three stations.

OFF THE COAST, boat's position usually falls outside the three-station triangle.

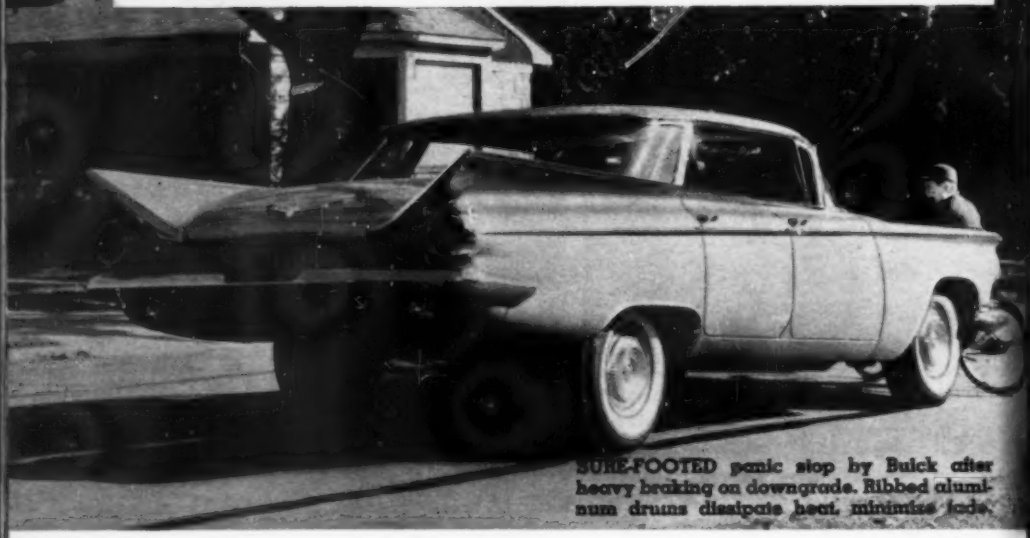


CAR CARE

# CAN YOU STOP IN *TIME?*

By Frederick C. Russell

Member, Society of Automotive Engineers



SURE-FOOTED panic stop by Buick after heavy braking on downgrade. Ribbed aluminum drums dissipate heat, minimize fade.

IN this age of high-speed cars, good brake design is more important than ever. The faster you go, the faster you must be able to stop—and stop repeatedly with brakes that will stand up to the rigors of friction and heat. Detroit metallurgists and engineers have joined forces to meet this need.

Let's take a look at some of the latest improvements in braking. In 1958, Buick introduced its award-winning aluminum front brake drum which provides smoother stopping power and longer service. Now, the finned design of this brake has been incorporated in the rear drums of the current crop of Buicks. The fins create air turbulence for better cooling—an important factor.

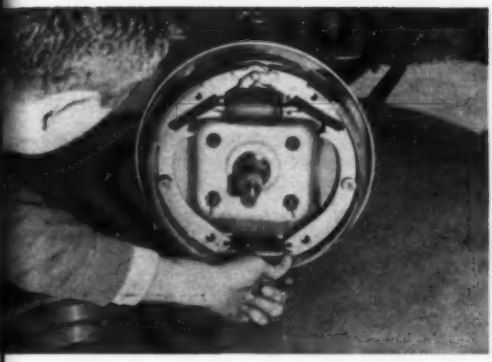
For 1959, some cars feature double-enveloping seals on brake drums to protect the lining against road spray and other foreign matter. At the speeds cars now hit puddles, ordinary sealing may not do—a good reason to hold your foot lightly on the brake pedal when passing

KEEP DIRT out of master brake cylinder. Before removing the plug, clean around it.

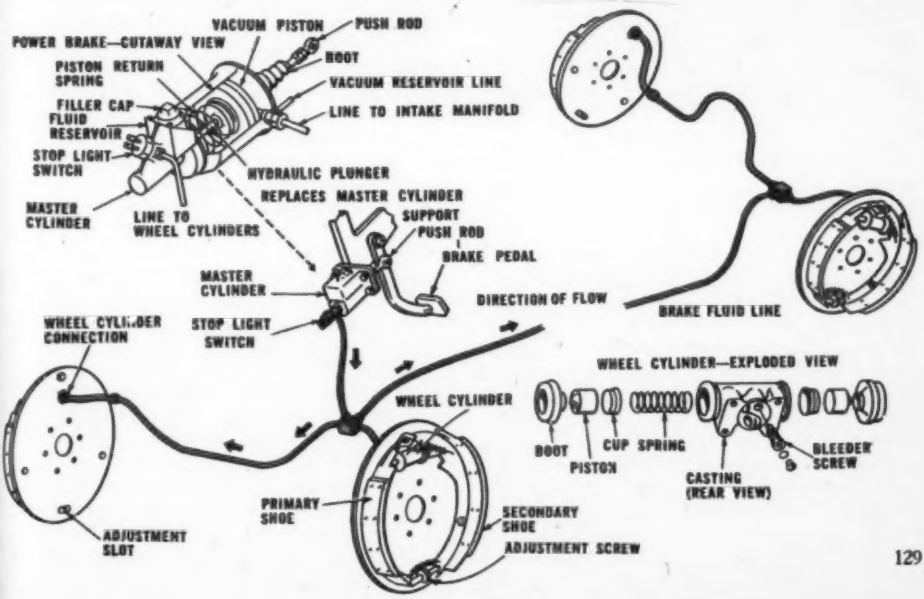
**SIMPLE TEST** to tell if power booster is working properly is explained in the text.

**POUR** brake fluid into water to test for harmful oil; it will form separate layer.

**COCKED SHOE** is a source of trouble in hydraulic brakes; check mechanical parts.



**VACUUM HOSE** may have collapsed if you experience hard pedal with power braking.



**LOOSE** front-wheel bearings, top left, are common cause of brake shoe vibration or noise.

**WEAK** retractor springs, top right, can be another cause of noisy vibration in brake shoes.

**CLEAN** all dust and dirt from lining of brake drum, left, to get the maximum in efficiency.

through a flooded section of roadway.

One of the trends that will be talked about most this year is the new low-profile tire. Engineers of the United States Rubber Company have cooked up an extra wide tire. Mounted on a 15-inch wheel it is the same height as a conventional tubeless tire on a 14-inch wheel. This permits a return to the better brake cooling of the 15-inch wheel.

Not only does excessive heat warp brake drums but it chars the lining. This explains why it is sometimes difficult to get proper braking after the most careful adjustment of shoes. One way to help solve this is to use thicker lining, as is being done currently. This also helps to head off brake noise. Don't forget, however, that noise usually is a warning to recheck the brake shoes which may not be properly adjusted or concentric with their drums.

Chrysler Corporation's Total Contact brakes represent a marked improvement over conventional brakes in that the shoes have the ability to match distortion of the drums during hard usage. Shoes we have known before have had a web of constant depth from heel to toe. In the Chrysler arrangement, the web is contoured so that the toe is not as wide as the heel. This permits greater flexibility of the shoe to match drum deflection at any point. No high pressure at either toe or heel is needed as would be required with a conventional design if the drums became more oval than the shoes during heavy braking.

**Another feature** of total contact brakes is the use of full-floating shoes instead of ones with fixed anchors. Special plates align the shoes, holding the anchors as well as the individual wheel cylinders. Since the forces from the piston and brake shoe return springs

are in a center plane, the shoes are prevented from twisting, thus giving them more even contact. There also are guides for controlling side movement of the shoes, maintaining constant pressure against the web. By this arrangement Chrysler engineers also provide for self-energizing action of all front brake shoes as well as the rear brake front shoes when the car is being stopped while traveling forward. There's self-energizing action of the rear shoe of each rear brake when the car is being stopped while traveling in reverse.

Note especially that the major improvements in braking cover the strictly mechanical parts of the system. It's a tip to all of us to pay more attention to shoe action and drum condition rather than to assume that because we have hydraulic brakes we merely have to guard against fluid leakage.

In the hydraulic department there is a need to use heavy-duty brake fluid. It can be had in a quality able to withstand 400° heat. Many a system fails completely when braking is excessive in hot weather just because inferior fluid vaporizes. The effect is like having no fluid in the lines. Brake fluid can become contaminated, too, causing piston cups to swell and deteriorate. The test is to note if a sample of fluid in a glass bottle separates into two distinct layers. If so, this means there is mineral oil in it. Next add water and shake up the mixture. Milky appearance is then added proof of oil content.

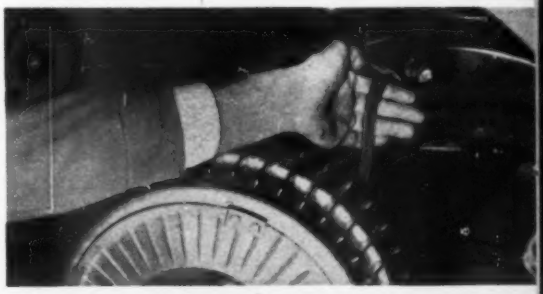
**Cleanliness** is vital in the hydraulic department. Never remove the filler plug without first wiping it clean and be careful that no foreign matter falls into the reservoir when the plug is removed. Check its vent hole occasionally; if clogged, it will allow pressure to build up in the system, causing the brakes to apply themselves. Trouble with the internal relief port often is due to contaminated fluid or dirt. In rebuilding the master cylinder, clean it with alcohol, dry it with air pressure and then flush it with fresh brake fluid.

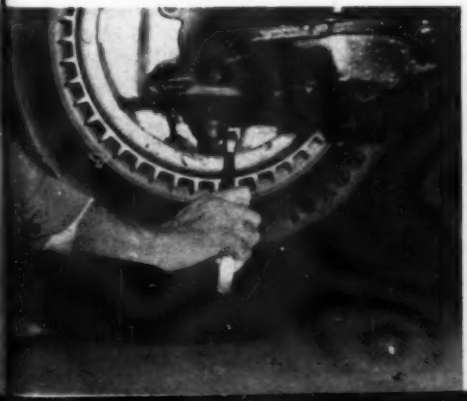
Finally, there is the power department. There's a simple test to determine if the boosting system is working. Switch off the engine and depress the pedal several times. This will remove all vacuum from the system. Now press on the brake [*Continued on page* 142]

**LEAKAGE** in hydraulic line, right, is a source of trouble; make this another check point.

**ADJUST BRAKE** by tightening the notched wheel, below, and then backing off two notches.

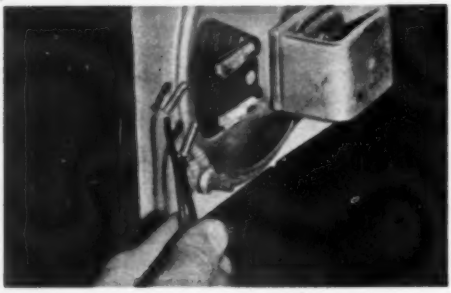
**JACK UP** the car and spin the wheel, lower right, to be sure reassembled brake doesn't drag.





## Hi-Fi Out Of Your TV Set

[*Continued from page* 99]

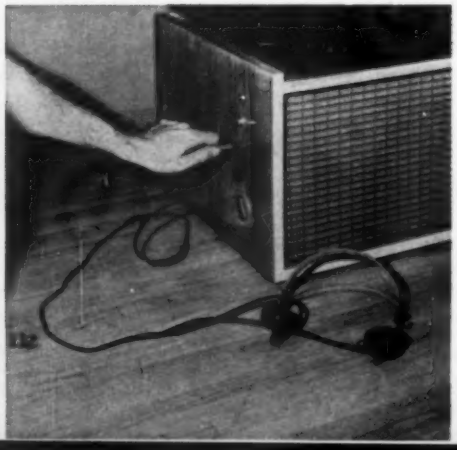


**AMPLIFIER LEADS are disconnected from TV speaker. Use removable plugs for connections.**

The banana plugs and jacks at the rear of the cabinet are connected with lamp cord to the amplifier output leads in your TV set. Remember to disconnect the two leads from the TV speaker.

The induction plate enables hard-of-hearing persons to sit at a comfortable distance from the TV set without having to turn up the volume full blast. An on/off switch is included in the earphone circuit so that the loud-speakers can be cut out when the earphones are being used. These earphones will really be appreciated when you want to watch the late show while the children are asleep. And you can enjoy peace and quiet during the day if your youngster uses them when watching noisy westerns or cartoons. •

**EARPHONE JACK permits private listening; now flick switch to silence loud-speakers.**



## Measuring Devices

[*Continued from page* 103]

the blade; the shorter, narrower 14- to 18-inch arm is called the tongue. This square is marked in graduations of eighths and hundredths of an inch and also carries the markings of a rafter or framing table, Essex board-measure table, and brace table. The framing square also serves as an excellent straight edge.

**The try square** is a thin steel blade set at right angles to a wood or steel stock. The blade may vary from two to 12 inches and the stock from four to eight inches. There is also an adjustable try-square with a miter and level as well as a movable blade which can be locked at any point along the stock. Try-squares are used as guides when marking across lumber, as straight edges to check ends and sides, and as squares to check jointed angles.

**The bevel square or T-bevel** consists of a steel blade six to 12 inches long with a 45° bevel point at one end. The opposite end fits into a slotted wooden beam and is held in place by a thumbscrew. The long slot in the beam permits the blade to be set at any angle. This square is used for laying out angles other than right angles and for transferring angles from one piece of stock to another.

**The marking gauge** is a tool for drawing guide lines parallel to an edge. It is a metal or wooden strip (beam) six to eight inches in length, marked with inch graduations, on which a block of wood or metal slides. From the beam projects a small marking point called the spur. The head can be locked in place at any point along the beam by means of a thumbscrew.

**Wing dividers, compasses and scribes** are names for the same tool. It consists of two hinged, pointed legs, an angle indicator and a setscrew. This tool is used to scribe circles, measure angles, thicknesses and distances and to transfer measurements from one piece of stock to another. Take care not to drop it or dull its points. While dulled or bent points can be sharpened with a file, both points must be kept exactly the same length.

Measuring instruments are not intended for hammering or prying. Treat your instruments with care and they will return your consideration in *full measure*.

—*Rolfe Schell & Dick Howe*

# HOW AMERICA'S NUMBER ONE CARBURETOR PUTS A TOUCH OF TOMORROW IN YOUR CAR!

• Dynamometer tests determine the effect of carburetion on maximum power output of a GM car engine. Carburetor design is matched to the specific requirements of each GM engine.

Every Rochester-GM Carburetor is a result of engineering dreams that are originated, researched and developed right here at Rochester. Backed by GM's Technical Center, engineers are now busy with tomorrow's fueling systems. And they are constantly developing new advances for today's Rochester-GM Carburetor. America's number one carburetor is serviced everywhere by Rochester-GM Carburetor specialists with the skill and knowledge passed along by these engineering masters. Let them adjust and maintain your Rochester-GM Carburetor for the best possible performance and economy. *Rochester Products Division of General Motors, Rochester, New York.*

• In the Research Fuel House at GM's Tech Center, seventeen different fuels are tested for operational effects. Results: carburetors designed to get better performance, stricter economy.

• At the Proving Grounds, these carburetors are given thousands of tortuous miles to test their ability to withstand extreme driving situations. Longer, trouble-free service is passed on to you.

• Millions of miles of stop-and-go traffic are put on these carburetors to assure you of the best possible mileage and performance from your GM car.

GM

GENERAL MOTORS

America's number one original equipment carburetors

**ROCHESTER CARBURETORS**

## Golden Hammer Awards

[*Continued from page* 122]

Ann Arbor, Mich.; W. Kenneth Greene, Roulette, Pa.; Maurice B. Madden, Carlinville, Ill.; Andy Klobnak, Des Moines, Ia.; Jacques Jodoin, Regina, Saskatchewan; Ernest C. Rasmussan, Racine, Wisc.; Henry Fey, Edmonton, Alberta; Kenneth Kitson, Cleveland, Ohio; Wally Chapman, Schaghticoke, N. Y.; Marion E. Konopacki, Gary, Ind.; Charles Shay, Rochester, N. Y.; Walter Glogoski, Conneaut, Ohio; R. C. Hosken, Louisville, Ky.; John G. Roth, Altoona, Pa.; Leland W. Martin, Spokane, Wash.; Robert Nelson, New Market, N. J.; L. E. Dunkin, Gold Beach, Ore.; Richard R. Krebs, St. Louis, Mo.; R. E. Dunn, St. Paul, Minn.; C. A. Gielish, Los Angeles, Calif.; A. Kaplan, Malden, Mass.; Philip H. Schneider, Cleveland, Ohio; Elbert T. Poff, Mullens, W. Va.; Willis E. Miller, Hayti, Mo.; Robert L. Clark, Winchester, Ind.; William Elchaltz, Elgin, Ill.; Calvin Picone, St. Michael, Ariz.; Joseph Mangano, Chicago, Ill.

**The following craftsmen have been awarded CERTIFICATES OF MERIT for their projects:**

William J. Yatsko, Pittsburgh, Pa.; Robert Raczka, Chicago, Ill.; R. S. Rogers, Inglewood, Calif.; Richard J. Novak, Danbury, Conn.; Jerry Snowden, Hollidaysburg, Pa.; John Marengo, Boylston, Mass.; James L. Thompson, Ft. Walton Beach, Fla.; Donald R. Wolfe, Mahoning, Pa.; Robert Gould, Pewaukee, Wisc.; James P. Sullivan, Newport, R. I.; Philip Sancartier, Renfrew, Ont.; Harold Ranpin, Denmark, Md.; Konrad K. Kallio, Astoria, Ore.; M. Russell Sheets, Jr., Poland, Ohio; Charles Dupuis, Bellevue, Wash.; Vincent Poutenis, Shirley, Mass.; Paul L. Stoner, Jr., Mount Joy, Pa.; M. F. Plummer, Hollidaysburg, Pa.; J. F. Pieri, Winnipeg, Canada; Frank Giordano, Massapequa, L. I., N. Y.; F. W. Wilkerson, Mineral Wells, Tex.; Joseph Romero, Albuquerque, N. M.; Ronald Aigner, Kohler, Wisc.; H. L. Spohn, Culver, Kan.; George A. Giguere, Bridgeport, Conn.; H. E. Mackie, Neepawaman, Canada; Richard C. Kraemer, New York, N. Y.; Walter C. Wronski, Opa-Locka, Fla.; George Ardwin, Detroit, Mich.; Charles R. Shaw, Des Moines, Ia.; Richard L. Riley, Waco, Tex.; Steve Asdourian, Detroit, Mich.; Charles Hunt, Tulsa, Okla.; H. S. DeLong, Merrimac, Mass.; Forrest Heflick, South Bend, Ind.; Eugene Krebs, Short Hills, N. J.; Roy G. Elliot, Silverton, Ohio; Paul Habighorst, Maspeth, L. I., N. Y.; Robert Sterling, Toledo, Ohio; G. Springer Crawford, Waynesville, Ohio; Peter Fopplario, New Haven, Conn.; Michael J. Hamernik, Bristol, Conn.; Robert Spikes, Berkeley, Calif.; Joseph Tanaszi, Millbury, Ohio; Roland Martin, Quebec, Canada; Donald G. Munn, Waynesville, Mont.; Valmont Fortin, Quebec, Canada; Thomas R. Martin, DCC USN, FPO N. Y.; Roy Erickson, Cochituate, Mass.; Paul Kitzmann, El Cajon, Calif.; Charles E. Lyons, Manchester, Conn.; James C. Robinson, East McKeesport, Pa.; Joseph N. Thaller, Niantic, Conn.; Claude L. Chamberlin, Moses Lake, Wisc.; Paul H. Ketcherside, Farmington, Mo.; Leonard Sripp, Ontario, Canada; Susan Sibille, Sunset, La.; Arnold E. Hausner, Lincoln, Neb.; George C. Donahue, Middleton, R. I.; John Hinko, Indiana, Pa.; Hyman I. Soloman, Bellerose, N. Y.; Tony Hutchison, Ponca City, Okla.; Glen R. Fornwalt, Lancaster, Pa.; Wayne Pressler, Castalia, Ohio; Reade D. Crossland, Hyattesville, Md.; Daniel Stern, Brooklyn, N. Y.; David A. Wilding, Lorain, Ohio.

**Watch for names of more winners next month.**

## Early American Chest

[*Continued from page* 113]

### Finishing

Before finishing, be sure all edges and surfaces are sanded as smooth as possible. Do this by working down through progressively finer grits of sandpaper, ending by rubbing lightly with very fine steel wool. Pay particular attention to all edges and be sure that the front edges on all drawer fronts are rounded off.

Dust the project carefully with a brush or soft cloth and then apply a wash coat of orange shellac. Prepare the wash coat by diluting the shellac you buy with 50% alcohol. Apply it with a brush. When it is perfectly dry to the touch, smooth it down with steel wool. Don't rub hard! You don't want to remove the shellac, just smooth it. How many coats of shellac you apply is really up to you, but a durable and attractive surface will need at least 4 or 5 wash coats. Be sure each coat is dry before doing another and rub with steel wool between coats.

The last step is to apply paste wax. Do it liberally and let it dry thoroughly. Then polish the piece to a smooth and lustrous tone. •

### BILL OF MATERIALS

| PART NO. | USE | PIECES | SIZE | MATERIAL |
|---|---|---|---|---|
| 1 | Side | 2 | ¾"x17"x39" | Pine |
| 2 | Top | 1 | ¾"x17"x48¼" | " |
| 3 | Top Shelf | 1 | ¾"x6"x48¼" | " |
| 4 | Top Back | 1 | ¾"x5¾"x48¼" | " |
| 5-6 | Frame | 2 | ¾"x3"x48¼" | " |
| | " | 2 | ¾"x2"x48¼" | " |
| | " | 6 | ¾"x2"x16½" | " |
| 7 | Lower Center | 2 | ¾"x2"x9" | " |
| | Frame | 2 | ¾"x2"x16" | " |
| 8 | Upper Center | 2 | ¾"x2"x20" | " |
| | Frame | 2 | ¾"x2"x15" | " |
| 9 | Feet | 4 | ¾"x2¾"x12" | " |
| 10 | Feet | 4 | ¾"x2¾"x4" | " |
| 11 | Drawer Guides | 10 | ⅝"x1½"x15" | Maple |
| 12 | Dust Panel | 1 | ¼"x33¼"x48¼" | Fir Ply |
| 13 | Drawer Frames | 6 | ¾"x2"x47½" | Pine |
| | | 6 | ¾"x2"x13" | " |
| | | 3 | ¾"x2"x9" | " |
| | Drawer Front | 8 | ¾"x5"x23¼" | " |
| | Drawer Side | 16 | ½"x5"x14" | Fir Ply |
| | Drawer Bottom | 8 | ¼"x14"x22¾" | Masonite |
| | Drawer Back | 8 | ½"x5"x22¼" | Fir Ply |
| | Drawer Guide | 8 | ¾"x1½"x14" | Maple |
| | Drawer Front | 2 | ¾"x9"x23½" | Pine |
| | Drawer Side | 4 | ½"x9"x15" | Fir Ply |
| | Drawer Bottom | 2 | ¼"x15"x22¾" | Masonite |
| | Drawer Back | 2 | ½"x9"x22¼" | Fir Ply |
| | Drawer Guide | 2 | ¾"x1½"x15" | Maple |

When answering advertisements please mention

MECHANIX ILLUSTRATED

Paneling in random-plank style is 4' x 8' Weldwood Prefinished Walnut V-Plank®.

# You can panel a room like this in a weekend . . .

**Weldwood prefinished wood panels give you ready-made beauty—save time and fuss—as little as $75 for a 12' x 8' wall.**

You can panel a lovely room like this in a weekend even with no previous experience. Weldwood *prefinished* wood panels come in a wide range of choice woods, prefinished and ready to brighten your home. Weldwood's exclusive 14-step lacquer process produces a true fine furniture finish so luxurious you can actually feel the difference. Saves you time and fuss in installing, too. What's more, it's a stain- and smear-resistant finish that's easy to keep clean through the years.

If you prefer, you can buy Weldwood Paneling *unfinished* at lower cost. Use Weldwood Satinlac® Lightener as a first coat to prevent the darkening or "wet" look usual when new wood is finished. And for a lustrous, *hand-rubbed* look with half the effort use Weldwood Satinlac®. Protects wood and brings out its beauty. See the more than 70 types of finishes of Weldwood paneling at your Weldwood lumber dealer's or at any of our 115 offices in U. S. and Canada.

**No nail holes** mar your handsome wood panels when you use Weldwood Contact Cement. Gives a permanent bond to furring strips. No clamping is necessary.

## WELDWOOD® PANELING

AND OTHER WELDWOOD PRODUCTS FOR HOME AND INDUSTRY.

**SEND THIS COUPON TO GET DETAILS!**

**NEW PREFINISHED PANELING BOOK** MI 1-59
**United States Plywood Corporation**
**Box 61, New York 46, N. Y.**

Please send me a copy of the new full-color folder, "Presenting Weldwood Prefinished Paneling for Fine Interiors," which beautifully illustrates in color the 14 Weldwood prefinished woods and gives complete installation details. I enclose 10¢.

Name.....

Street.....

City.....State.....

# Monthly PHOTO Contest

**Please put your name, address and picture-taking data on back of each print. Wrap with cardboard stiffeners and enclose a self-addressed stamped envelope or postage for return of unused photos. Prize-winning pictures are not returned. Judges are MI Editors. Duplicate prizes awarded in case of tie. Address entries to: *Mechanix Illustrated*, Photo Contest, 67 W. 44th St., N.Y.C. 36.**

1st Prize ($25).....SAUCERS IN SPACE
Fred Houk, Cleveland, coupled Ansco Speedex to microscope for photo of air bubbles in melted sugar. Light was 75-watt bulb; 5 minutes at f-4.5.

**$10 Award .....PATTERN**
**Andre Varga, of Toulouse, France, used exposure of f-11 at 1/125th, had Kodak Verichrome Pan film in 2¼ x 2¼ roll film camera.**

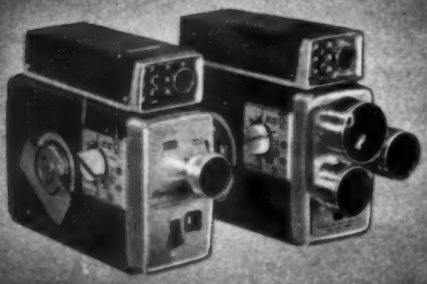
**$10 Award .....PACIFIC**
**Using a Rollei and Super XX film, Roy Herrick, of Boise, Idaho, shot beach scene through light yellow filter: f-16, 1/100th.**

**$10 Award....STUDY IN LIGHT**
**Photo below was taken with a Rollei by Bertram Griffin, Gormly, Ontario, Canada. His exposure was f-8 at 1/100th, film was Gavaert Gavapan 27.**

# Photography Today

By Robert Brightman

- *Brownie Scopesight Cameras*
- *Signet 80*
- *Speedy Film Drying*



TWO NEW 8mm movie cameras feature a built-in light meter coupled to lens diaphragm; three-lens turret model is at right.

EASTMAN'S LATEST, the Signet 80, a 35mm camera with interchangeable lenses; the shutter speeds range from ¼ to 1/250th.

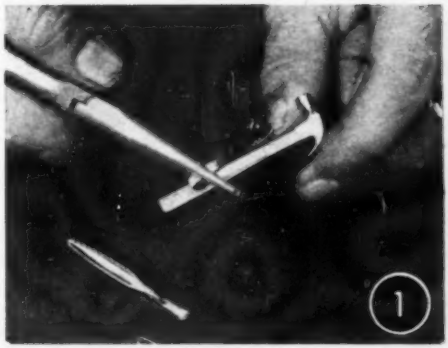
NEW cameras, new cars, new products! This is the season, it seems. Latest entry into the exposure-meter-coupled-to-diaphragm movie camera field is the Brownie Scopesight, an 8mm camera with an f-1.9 lens. A more elaborate model, a turret job that takes a 24mm telephoto and a 6.5mm wide angle converter lens (in addition to the standard 13mm lens), has a price tag of $99.50. The cameras are finished in gray and aluminum.

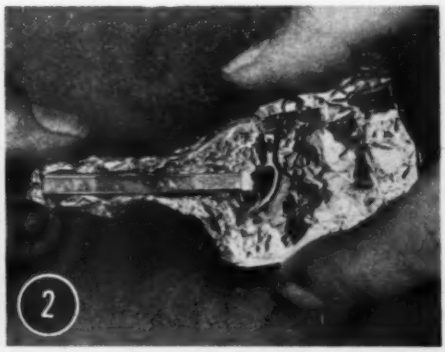
Eastman's camera—or Kodak's to be exact, as the name Eastman is generally reserved by the company for its line of professional [*Continued on page* 140]

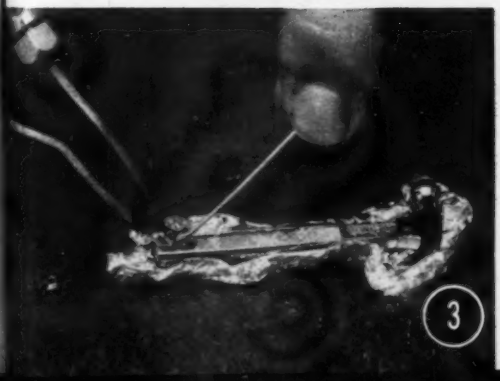
FILM DRYING is speeded up by a new product made by Yankee Photo Products. The film is immersed in the liquid for two minutes after final rinse and then squeegeed between viscose sponges as shown. Negatives are ready for printing within minutes.

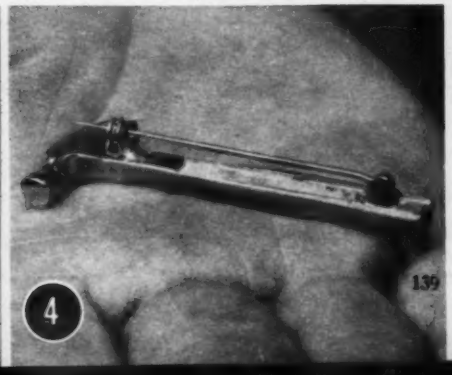
# MI's TIE BAR BROOCH

BEEN awarded a Golden Hammer Tie Bar you'd like to convert to a brooch for your best gal? It's easy: (1) peel off the tie clip with needle-nose pliers; (2) mold aluminum foil around the hammer to dissipate heat rapidly when soldering and so protect the finish; (3) solder a two-piece pin back in place and (4) you have it. You can get pin backs at your local hobby shop or from Immerman's, 1020 Euclid Ave., Cleveland 15, Ohio. •



## Radio-Direction Finder

[*Continued from page* 126]

attributed to poorly soldered joints. It's well for a novice to practice a bit before starting. All joints must be clean and wires crimped tight. Heat is applied to the joint until the terminal is hot enough to melt the solder. Then the solder is applied to the joint and the tip of the iron and allowed to flow over the joint. Only a rosin core solder should be used, preferably one designed specifically for radio work.

To use the set as a direction finder in a boat, the compass rose is set for the same heading as the vessel and a station is tuned in. The loop is then rotated for maximum meter indication and the bearing on the station is read directly from the compass rose. This procedure is repeated on two or more stations and each bearing is plotted on the chart in degrees. The point of intersection reveals your actual position.

To home in on a station, it is tuned in and the compass rose is set to the same heading as the vessel. Then the bearing control is rotated for maximum meter indication. The resulting bearing is read and the boat's course is changed to this heading. For best results the unit must not be operated in strong electric or magnetic fields, nor should it be used in the vicinity of large masses of metal. It should always be level when taking bearings and the compass rose should be set to the same heading as the boat's compass.

Apart from being a great asset on a boat, the radio direction finder is valuable to the hunter, hiker, camper, fisherman or aviator. No one can get lost if he's within range of a radio station—and he can listen to music as he wends his way home. •

**MI's CAR TESTER (also an old salt) ran tests on set, declared it to be on the beam.**

## Photography Today

[*Continued from page* 138]

equipment—has a number of new refinements. For example, two filters are built into the camera. One is a Type A filter to allow the use of indoor color film outdoors and the other is a skylight filter for minimizing haze. The finder is marked with three frames to correspond with the taking angle of the three available lenses. A control knob permits the user to adjust the meter to the speed of the film being used, ASA 10 to 40. The camera exhibits Eastman's usual attention to fine details.

**Signet 80.** What with the rash of Japanese cameras popping out all over, it's refreshing to take a gander at a new American product in the 35mm rat race. Latest is the Signet 80, also a product of that prolific company, Eastman Kodak. Kodak calls its new entry an American Classic. It's completely American, except for the German meter which is built into the camera body. To use the meter, the camera is aimed at the scene to be photographed. A dial is then turned until its red pointer is aligned with a white pointer. Exposure values are then read directly off the meter. Incident light values can also be read with the meter by means of a translucent mask supplied with the camera.

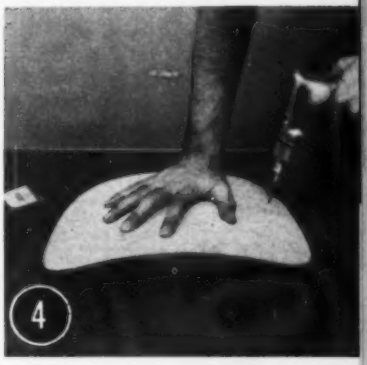
The shutter speed of the camera ranges from 1/4 to 1/250th of a second. The lens is an f-2.8, 50mm Ektanar. Camera with carrying case sells for $144.

**Speedy Film Dryer.** This is for the guy who is always in a hurry or for the fellow who always makes the excuse, "I haven't got the prints for you because the negatives aren't dry yet." Well, this is a liquid that dries film in a hurry. A pint of it sells for $2.25. Instant Film Dryer, as the product is called, is distributed by the Yankee Photo Products Company of 3325 Union Pacific Ave., Los Angeles 23, Calif.

To use, the film is immersed in the liquid for two minutes and then wiped as dry as possible by means of a spring-loaded viscose sponge. The film is then hung up to dry in the usual fashion. While the film is called Instant Film Dryer, we found that a roll of 35mm film took about ten minutes to get bone-dry. But our basement darkroom, that evening, had a rather high humidity level. Good stuff. •

## EVENING PROJECT

# A "NEW" CHAIR




Old dinette chairs can be given a substantial lease on life by recovering the seats and replacing the upholstered backs with new ones made of pre-shaped plywood.

The first step (1) is to unscrew the old back and seat from the frame. Next (2) clean up the frame with a mild scouring powder and a good metal polish. The third step is cut a sheet of fabric-backed vinyl slightly larger than the seat. Tack it in place as shown. Stretch the corners into place before tacking down. The vinyl fabric has the necessary "give" for this important step.

Preformed unfinished plywood backs can be purchased from the Country Workshop, 95 Rome St., Newark 5, N.J. for about $8 per set of four. Drill pilot holes (4) in the back and then assemble the back to the frame (5). The final photo (6) shows the rejuvenated chair. Neat! •

**MEN! Make up to $1,000.00 IN A MONTH!**

**without "SELLING"**

**Sensational Demand for Low-Priced Fire Alarm PLUS Sure-Fire "No-Selling" Plan Offers Ambitious Men Huge Profit Opportunities**

**AMAZING NEW INVENTION**

Even beginners who never sold anything in their lives are cleaning up unbelievable profits with the first practical effective, low priced Fire Alarm ever invented . . . needed, wanted in homes, factories, offices, stores, on farms, for boats, everywhere. Professional salesmen are making biggest profits in years! Later in this ad I'll tell you about the plan that's producing orders for 1 to 12 Fire Alarms per sale from 8 out of 10 prospects . . . without selling. Here are the facts about the Fire Alarm. It hangs on the wall like a picture—no wiring, no installation. It's always on guard . . . It 'smells' a fire before danger point. When temperature rises, Fire Alarm goes off automatically howls loud warning that can be heard 1/5 mile wakes up soundest sleeper, give precious time to put out fire, call fire department, or escape. And it sells for only $4.95 with profit up to $2.70 on each one.

**Nearest Thing to AUTOMATION SELLING**

With our field-tested plan customers sell themselves. No cold canvassing. No hard selling. It's the nearest thing to 'Automation Selling.' Imagine a sales plan even a child can use successfully because the sales tools we give you (and which you leave with your prospects) do all your selling even while you sleep! No room here to give you all the details but if you want big money fast rush the coupon now.

**Make This Lighted-Match Demonstration**

Sensitive! Lighted match triggers Alarms in 3 seconds.

**Free Sales Kit**

Send no money. Just rush coupon below for all the exciting moneymaking facts, complete Illustrated Sales Kit, everything you need to make money your first day. Learn how selling only 20 Fire Alarms a day pays you $1,000.00 profit in a month. No competition anywhere. Get in on the ground floor now. Rush this coupon.

**Made $26.52 in 3 Hours!**

"Received first shipment about noon. Worked 3 hours and made $26.52 profit. It's a terrific seller!" —Stanley

**MERLITE INDUSTRIES, Inc.**
(ALARM DIVISION)
114 E. 32nd St., Dept. F-10T New York 16, N. Y.

ALVIN WESLEY, Sales Manager
Merlite Industries, Inc. (Alarm Division)
114 E. 32nd St., Dept. F-10T, New York 16, N. Y.

Rush FREE SALES KIT and full details about your "No-Selling" plan which gives me opportunity to make up to $1,000.00 in a month without cold canvassing and hard selling—automatically. I am not obligated.

Name _____

Address _____

City _____ Zone _____ State _____

In Canada: Mopa Co., Ltd., 371 Dowd St., Montreal 1, P.Q.


## Can You Stop In Time?

[*Continued from page* 131]

pedal and start the engine. If all is well, the pedal will move forward when power is added to your manual pressure.

Should the booster not be working, there may be leakage in the reserve tank, at the check valve or at the hose connection. A vacuum test also should be made to determine if vacuum is 18 to 20 inches while the engine idles. There also may be mechanical trouble involving the brake pedal hub and the linkage may be out of alignment. A click heard when the brakes are being used calls for reducing the amount of pedal free play.

**Slow release** of the brakes may indicate a sticky vacuum valve. A broken piston return spring will have the same effect and so will any interference with the piston. Sticking vacuum action will also cause severe braking.

Most drivers go into a panic when the brake pedal goes to the floor, or almost there. This indicates that there is air in the system (commonly due to re-using bled-off fluid instead of all new fluid); the brakes needing adjusting; or a lack of fluid in the master cylinder's reservoir. If the latter is the case, leakage in the line or at the wheel cylinders should be suspected. A leak also may have developed at the hydraulic piston seal, at the compensating valve or at the compensating port.

Since the average set of tires has only 125 square inches of contact with the road surface—just about the same contact your own two feet have with the sidewalk—your brakes can't be too good. Even if they're slightly out of equalization, a skid is possible. If you're to stop on time, you'd better keep abreast of the advances in braking. •


**FUTURA**

Scaled after the famous Lincoln Futura, this model has an electric motor, lights, indicator and plastic canopy. For full-scale plans send 50 cents to MECHANIX ILLUSTRATED, Fawcett Bldg., Greenwich, Conn. Specify Plan M-237, Futura.

The Amateur Telescope Maker's Page

# VENUS

Venus at 200 power. The planet exhibits phases like the moon.

A STRIKING close conjunction of the crescent moon and brilliant planet Venus will add beauty to the twilight wherever skies are clear over the United States after sunset on Wednesday evening, March 11. In fact, across the southernmost latitudes of the western and some central states, observers will see the earth's real satellite graze or actually eclipse our fascinating sister world. This event is called a lunar occultation.

The mystery of what lies beneath the envelope of cloud surrounding Venus becomes even more tantalizing as the age of human space exploration approaches. Astronomers have never seen the planet's surface and can only conjecture about the length of a day there, if indeed the planet does rotate on its axis. Most other solar system bodies do and it is interesting to ponder whether some form of lush vegetation and high level animal life is thriving in what would be a pretty steamy, tropical environment except in the polar areas. Venus orbits at 67,000,000 miles from the sun, or about 26,000,000 miles closer than the earth.

**Careful observation** of the planet's high cloud cover reveals dusky regions which could be a glimpse of lower layers, atmospheric phenomena, or even indistinct ground features. The last have been tentatively mapped at the Meudon Observatory in France by dot intensity drawings on cellophane spanning a period of ten days. Superimposition of all the sheets confirms permanent markings as against drifting cloud formations. A telescopic magnification of 350 diameters or more is recommended for visual study of Venus, although of course its changing phases are clearly discernible in good binoculars. Due to the planet's reflected glare, serious observations are confined to daylight hours.

Both Ohio State University and the Naval [*Continued on page* 166]

[Continued from page 65]

*Is this slight increase in compression the reason why we have to use high-test gasoline in these six-cylinder engines to keep them from "knocking" or "pinging"? Can this same engine mentioned above be adjusted to use regular gas satisfactorily as I have so often heard? If so, tell me how and if not, tell me why, please.*

*Ken Clarke*
*Okla. City, Okla.*

The only way your engine can be "adjusted" to use regular gas without pinging is to have the spark timing retarded. As retarding the spark timing increases the gas consumption for every degree it is retarded, you'd eventually end up with no money savings—due to the extra gas burned—and would have an extremely poor-running automobile. A compression ratio of 8.6:1 is a borderline case today, and you'll be happier using high test, but be sure to keep your engine tuned to get the most out of premium fuel.

● *Two questions, if you please: (1) Are you blood kin to Ernest Hemingway? (2) What do you do for a living?*

*Henry L. Kirchner*
*Tulsa, Okla.*

Sorry I can't claim any kinship to Hemingway. My main occupation is gathering holly for the Christmas trade.

● *Have been reading your test reports of new cars since you started penning them and truly get a kick reading your whimsical remarks. Always feel you are a damned lucky fellow—rolling in fat pay and driving in brand new cars. Finally, will you ask your trunk tester to shave off the remaining hair on his head so that we won't confuse you two. Best wishes to you.*

*Neo Lam Chuan*
*Singapore 19*

The only trouble with "fat pay" is that all you can use it for is getting fat. As for riding around in all those brand-new cars, you kids with those New Jersey-built rickshas and the gals who started the sack dress craze are a lot better off than trying to push a Michigan balloon into the Lincoln Tunnel on Friday night.

● *I am a subscriber to your magazine and have enjoyed your articles and column for a long time. Keep up the good work! Incidentally, I want to put in my claim for "Most Distant Reader."*

*Robert H. Gay*
*Sumatra, Indonesia*

The kid in the letter above, Bob, from Singapore, could give you quite a push on your "Most Distant Reader" title, but you still have the edge. Any other challengers? No claims from East Orange, N.J., will be considered.

● *In all your car tests you give performance figures recorded on corrected speedometer. I know how to measure the speedometer error in a car, given a stop watch and a measured mile. But it is one thing to measure the error and quite another to correct it. Could you tell me how to get true readings from my speedometer; e.g., how to have it read 60 mph when I am actually going 60 mph?*

*Edward Kirke*
*Mexico*

First, figure out your error over a measured mile with a stopwatch. Find how fast it must indicate to read a true 60 mph. For example, if you must go 66 mph to do an honest 60, any top-grade speedometer service can quickly make the adjustment for you. You can do it yourself if you're real gutty and clever, but this is not recommended. Bear in mind, your speedometer itself may be 100 accurate at 60 mph but be thrown off by tire conditions, air pressure or a number of other factors. Speedometers should be adjusted with a master clock which will show if the instrument is at fault. But this won't help if rear axle ratio or tires vary from normal.

In all the hundreds of speedometers I've tested, I've never found one that was accurate all the way through the complete range. If it was on at 60 mph, it was off at 30 mph or 80 mph or even 50 mph. I found one weird one that was accurate at 50 mph but was eight mph off at 60 mph. When we mention in our car tests "All times on a corrected speedometer," it merely means that we've located the accurate points on the instrument for each speed tested and do our timing at these points. To be sure that we're hitting this point on the nose, we always make at least six runs at each distance.

● *According to my 16-cylinder, supercharged brain, an American-built convertible should theoretically be more roadable, and corner better, than a four-door sedan of the same make and year because: (a) the convertible doesn't carry the weight of a steel top on high, so it should have a lower*

[Continued on page 146]

*What kind of a car do you want, exactly? Chevrolet has a choice of nine engines, five transmissions, two suspension systems, regular or Positraction rear axles, special cams, two air-conditioning systems, even Fuel Injection—the list of extra-cost options is tremendous. But what it means is that you can virtually design your own car, tailored precisely to your needs. Here's just one example:*

# "I 'built' my Chevy for top economy... and extra easy running at 300 miles a day."

"As a traveling salesman with a big Midwest territory I rack off about 300 miles a day—and, boy, how I love gas economy. But I like all the comfort I can get, too.

"I used to wish I could design my own car, until this year. That's when my on-the-ball dealer friend showed me how I could 'build' just the right car out of Chevy's terrific list of options. Look what I got:

"I picked a Biscayne two-door, 'cause I pay for my own auto and that's right at the base of the price list. A Hi-Thrift 6 engine—that's the world's best workhorse. And Overdrive; with that high ratio you can just whisper down the road at good fast cruising speeds. No strain, hour after hour . . . and that gas needle *never* seems to go down!

"Then I pampered myself a little bit. Foam rubber padding in the seats (I'm a big guy and I spend *hours* at the wheel); Chevy's new throttle-holder where you just set your cruising speed for those long straights and the car holds it while you rest your right foot; the big 'fresh-air' heater. Man, you should drive my car. It fits me like a glove!"

There's something to figure on, friends. Whatever kind of car you want—sports car, salesman's car, town car—you can "design" it for yourself. But check your Chevrolet dealer and see how you can suit yourself to a T. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

## Hunting The Snowshoe

[*Continued from page* 70]

He likes to live near or in dense cover and is partial to cedar swamps and big alder jungles or juniper jungles that have an abundant supply of food nearby: tender aspen and popple wood. To hide the varying hare from his deadliest enemies—the great horned owl, barred owl, coyote, wolf, fox, bobcat and weasel family including the fierce marten and fisher, as well as man and the house cat—nature gave him a marvelous coat. In summer he is as brown as the rocks and roots. In winter he turns as white as the soft surface over which he races with such amazing speed.

**The varying hare abounds** by the tens of thousands in the wonderfully wild and unspoiled Adirondack Mountains of New York, a forest covering more than 15,000 square miles. The snowshoe is also reported to be plentiful in most of Maine, portions of New Hampshire, Vermont, Michigan, Minnesota, California and Washington and moderately plentiful in a few other states.

The beginner should know that he must hunt snowshoes deep in the woods where the undergrowth is thick and a swamp, stream or pond is handy. Take your compass!

Men new to an area will do well to drive their cars slowly over the back roads and keep an eye on the shoulders of the road. Snowshoes love to cross woods roads and to frolic up and down them in the moonlight. When you find snowshoe tracks, stop and investigate. Follow the tracks into the woods for several hundred feet. If they peter out into nothing, go back to your car and drive on. When you come upon a maze of deep runways cut through the forest like city streets, you've hit the jackpot. Go back and fetch the hounds and guns.

**When your dogs jump** a snowshoe, you have four things to do: 1. Look around for well-beaten runways on each side. If possible find several places where two or more intersect; 2. Listen to the dogs and try to determine at the earliest moment in which direction the rabbit will circle back, usually along established runways, especially if the snow is deep. Should there be only several inches of snow, the snowshoes are likely to zig-zag all over the woods on their way back and pop up at the most un-

[*Continued on page* 148]

## Mail For McCahill

[*Continued from page* 144]

*center of gravity than the sedan; (b) the convertible's heavier frame, that supposedly makes up for the absent bracing of a steel top, gives more weight to the bottom of the open car than a sedan has and so lowers the soft-top's CG even more; (c) the greater weight of the soft-top, due to its beefier frame and its top raising mechanism, etc., should also help it to hold the road better than the steel-topped car.*

*Now, Uncle Tom, I would like to know whether your two million miles of driving experience confirms my brainstorm or blows it higher than a conceited politician. In your opinion, are convertibles really more roadable than sedans of the same make and year? And is the extra roadability, if any, enough to make the soft-tops safer than their hard-headed brothers, even though the soft-tops hardly give any protection in case of a roll-over?*

*David Michaelson*
*Montreal, Canada*

The average steel top today can be easily carried by a ruptured ten-year-old and actually weighs little more than the framework and fabric of the average convertible. From your letter I believe you are referring to high-speed cornering with American convertibles. If so, a steel top job should prove more roadable because of better streamlining. Have you ever noticed how even the finest convertible tops balloon out of shape at high speeds? Another point: With the top down, extreme turbulence, even on the floor, is caused by pushing the ram-like windshield through the air with a distorted bleed-off shape immediately behind it. Even your big head creates disturbing windcurrents. No, the sedan is a better road car than the convertible, if for no other reason than the fact that all American cars are designed basically as closed jobs. The convertible mbdels are lopped in over these designs as afterthoughts.

● *My father and I had an argument on which was the fastest American-made car on the road. He says it's the Ford Thunderbird and I say it's the Chrysler 500D. Who's right, or are we both wrong?*

*Joe Houlette*
*Clark's Green, Pa.*

You're both wrong, I'm sorry to say. The Ford Thunderbird did a sizzling 107 mph at Daytona Beach last winter (which meant it was one of the slowest cars on the beach). A "500D Chrysler" hasn't been made yet, to our

[*Continued on page* 148]

Hydroplane racing proves that engines do their *best* with Champion spark plugs. The last 13 Gold Cup winners have been powered by Champions.

Q. Why do 9 out of 10 powerboat winners use Champion spark plugs?

A. These experts know spark plugs can win or lose a race. And Champions deliver the full-firing spark they need to win. For performance like this in your car, insist on Champions.

*World's favorite spark plug—engineered for every car built by Ford, General Motors, Chrysler, American Motors, Studebaker-Packard and every major foreign maker*

**CHAMPION**

## Hunting The Snowshoe

[*Continued from page* 146]

expected places; 3. When the baying of the hounds swings to your right or left, this is your cue to quickly take a stand in view of the most likely runway. Try to find a high spot, an old stump, pile of rocks, blowdown or mound and climb up to where you can see clearly for some distance about you; 4. Remain as motionless as possible. Keep your eyes alert for the slightest movement in the brush. Never shoot until you can see the rabbit clearly and distinctly and know that no dog or hunter is in the line of fire.

**It is always a good idea** to look over the country you plan to hunt each year. A place that was loaded with snowshoes last winter will not necessarily provide good shooting this season. Great horned owls, foxes, coyotes, wolves, weasels and bobcats have a way of finding rabbit concentrations and decimating them during the lean winter months.

The best hounds for this hunting—where the snow is often deep and fluffy—are beagles and bassets. Of the two, I prefer the basset. He works slower, therefore brings the snowshoe back in tighter circles and he has a voice that is pure woods music. Bassets are low to the ground, get under dense undergrowths and blowdowns that would stop a beagle and most of them can handle deep snow beautifully.

**Most hunters use shotguns** for snowshoes. The gauge varies to taste. I'm told that the 20-gauge is the popular gun at the moment but I still prefer the old 12 semi-automatic, with No. 6 shot in standard field load. This gun makes clean kills and reaches out a bit further for long shots. A few, especially women, like the little .410. The .22 is also growing in popularity. I know of at least one couple who successfully hunt snowshoes with bows and arrows.

Clothing is something to consider carefully. Snowshoe country is sub-zero land and you'll need heavy long johns, woolen shirts and socks and heavy woolen pants in most places. I use a down parka for hunting the Adirondacks where it frequently gets to 20 and 30 below zero. Snowshoes are another good item to take along. Include hand warmers, warm gloves and insulated boots and you'll be ready for some happy hunting. •

## Mail For McCahill

[*Continued from page* 146]

knowledge, but the 300D was the 1958 model. The fastest car in 1958 was the Pontiac, and the fastest accelerating car in a standing mile was the Chrysler 300D. The Daytona Beach stock car speed record is still held by a '56 Chrysler 300B.

● *I would like to know if you have ever tested a Rolls-Royce? If so, what do you think of this car? Are all the things they say about it true? Other people I've talked to have said it was all a big hoax.*

*Philip Petty*
*Hayward, Calif.*

Tested a '58 Rolls recently, but not for publication. It was great, and all the good things ever said about it are true.

● *Thought you might be interested in the enclosed clipping. I've heard the Volkswagen was good, but this is ridiculous.*

*Geo. E. Millar*
*Manitoba, Canada*

Clipping from the Winnipeg Tribune dated May 20, 1958, showed a Volkswagen floating in midstream with a woman and child in it, after the car rolled down an embankment and into a swift current. All were saved, including the Volkswagen, due to its boat-like properties. The advice of this department: if such a thing should happen to you, roll up the windows because the spray may ruin your watch.

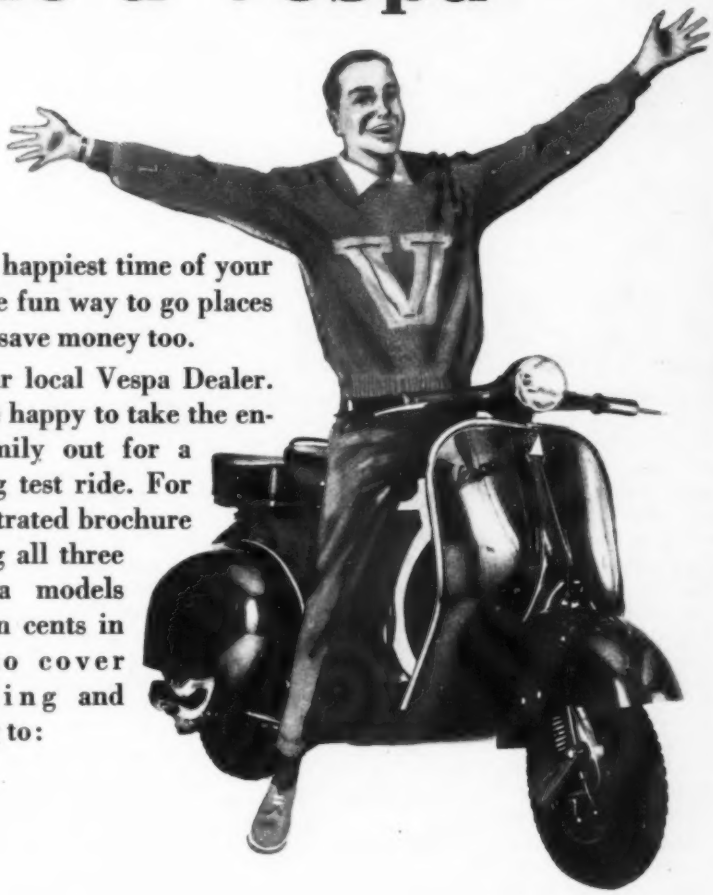
● *After reading your piece about Chrysler's Auto Pilot in your Imperial Test, I tried to get one installed in my '57 New Yorker. Unfortunately, it costs almost twice as much as when you buy it factory-installed so I gave it up. The Service Manager told me that there are other similar gadgets which sell for much less. Do you have any dope on these?*

*Richard C. Cole*
*Chicago, Ill.*

Recently I tried out a poor man's Auto Pilot that does everything the Auto Pilot does except add and decrease speed automatically for up and downhill going. This had features, however, that even the real Auto Pilot doesn't, and was better for suburban use in some ways. It's simple to install (about 20 minutes) and sells for about five bucks. Like the Auto Pilot, it's controlled by brake pedal and throttle, and disengages the instant you flick the brake. The guy manufacturing it is Leon Arpin, Viomul Chemical Corp., North Caldwell, N.J.

—*Tom McCahill*

# There's nothing like a Vespa




For the happiest time of your life. The fun way to go places . . . and save money too.

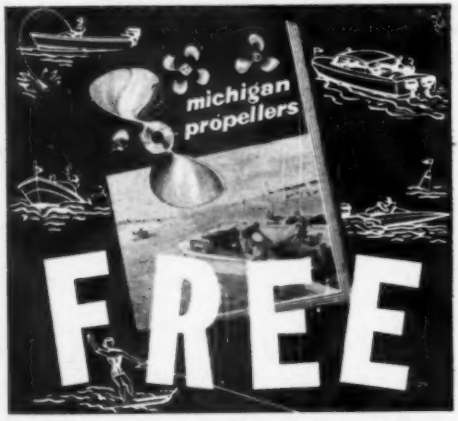
See your local Vespa Dealer. He'll be happy to take the entire family out for a thrilling test ride. For an illustrated brochure showing all three Vespa models send ten cents in coin to cover handling and mailing to:

**Vespa Distributing Corporation**
**3 East 54th Street, New York 22, New York**

THIS NUGGET OF INFORMATION ON HOW TO GET

Double Pleasure

FROM YOUR OUTBOARD MOTOR AND BOAT




**THE 1959 MICHIGAN WHEEL OUTBOARD CATALOG** contains carefully engineered propeller recommendations for virtually every engine-boat-and-purpose combination, including the new large motors . . . each one proved by exhaustive running tests to provide far superior performance to that obtained by the original all-purpose propeller.

**BETTER SKIING . . . MORE SPEED . . . BETTER CRUISING . . .** whichever you want, can be obtained with the proper MICHIGAN WHEEL. And it is easy to spot in the new MICHIGAN catalog. See your Michigan Dealer — Send for catalog. The catalog also contains

**8 CHECK POINTS TO BETTER OUTBOARD PERFORMANCE . . .** highly valuable information gained from years of experience on what you can do to your boat and motor to enhance performance . . . plus literally hundreds of

***BARGAINS IN BOATING ACCESSORIES***

**MICHIGAN WHEEL COMPANY**
**Dept. M-1, Grand Rapids 2, Mich.**

Gentlemen: Please send me FREE of charge a copy of your new 1959 Outboard Catalog.

NAME_____

ADDRESS_____

CITY_____ STATE_____

## *The '59 Plymouth*

[*Continued from page* 87]

under 15 seconds in getting to 60 mph. Soon ten seconds became the magic mark. A guy named Pete Estes, Chief Engineer of Pontiac, built cars that in 1957 set the current MI 0-60 record for standard sedans at 8.2 seconds. The '59 Pontiac in its test hit 8.2 seconds again and, as anyone on the drag strips knows, Pontiac has been the hot bomb for several years now.

What surprised me, in this year of de-emphasized performance, was the way the Fury got to 60 mph. After many runs, the facts were undeniable: the 1959 Plymouth Sports Fury averaged 8.2 seconds, which puts it in a dead heat with the thundering Pontiacs as the drag king of the nation—or, to be international, the world, as no European sedan can come close to this performance.

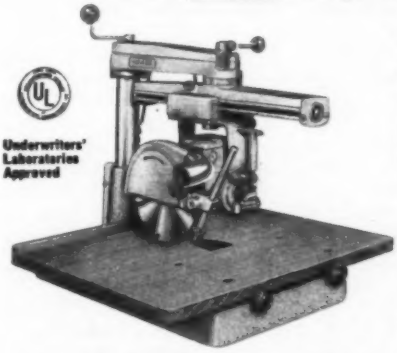
**When Speed Weeks roll around** and the MI Trophy is up for grabs in the one mile standing-start runs, if the Fury doesn't win its class hands-down, the car that beats it will have to be scrutinized pretty thoroughly because I've tested all the competitors and none can come even close to it. In the overall standing-start mile the Plymouth can be beaten but it will take a big car to do it—a Chrysler 300 or a 140-mph Pontiac. Top speed on the Fury I tested was 122 mph, which is not enough to win a one mile standing-start run on Daytona Beach in the unlimited class. The Plymouth and the Pontiac would perhaps be together, wheel turn for wheel turn, at the half-mile post but then the bigger, more powerful engines of either the Pontiac or Chrysler would take over and forge ahead.

I drove this Plymouth flat-out, which was 122 mph, for over 40 miles on the Chrysler Proving Grounds track and there wasn't the slightest sign of overheating or breakdown. It felt just as comfortable at these high speeds as did the '59 Imperial which I drove at exactly the same rate right after making the Plymouth runs. It should be borne in mind that all acceleration runs were made with the automatic Torque Flite transmission. If you're a real bearcat for performance you can order the Fury with a manual stick shift which, if you're up to it in skill, should

[*Continued on page* 152]

# NEW DELTA "SUPER 900" RADIAL SAW

## with honest 1 h. p. motor that develops up to 2 full h. p.!



Underwriters' Laboratories Approved

**NEW DELTA "SUPER 900":** *Honest* 1 h.p. motor guaranteed for a full year! New "up front" guide fence positioning knobs and easy access controls. Plus exclusive combination of Delta Quality features: double overarm construction, and select edge grain fir table.

It's the guts—not the gimmicks—that count in a radial saw. Delta's new "Super 900" has *honest* power where you need it—*at the blade*—for greater sustained cutting, faster, smoother working, and safer operation. *More power than any 9" home workshop radial saw ever built!* The "Super 900" is actually a complete, all-purpose workshop. With Delta's *exclusive* "turret arm" action you can swing, spin and tilt the head; any job is easy, even left hand mitering.

See this incomparable new "Super 900" today at your Delta dealer—he's listed under "TOOLS" in the Yellow Pages—or at leading department, hardware or building supply stores. Arrange easy terms to suit *you*. Rockwell Manufacturing Co., Delta Power Tool Division, 556A N. Lexington Ave., Pittsburgh 8, Pa.

DELTA POWER TOOLS

another fine product by

**ROCKWELL**

# Made $900 IN SPARE TIME

"I did very well last year with my Foley equipment, about 950 saws, in my spare time. About $900 for me."—Leo H. Mix.

You can make from $3 to $6 an hour in Spare Time. With a Foley Automatic Saw Filer you can file hand, band and circular saws better than the most expert hand filer. Cash business—no canvassing. No eyestrain, no experience needed.

**FREE BOOK "MONEY MAKING FACTS"** shows just how you can start at home in spare time, with small investment, no overhead—and develop into a full-time repair shop. Time payments if desired. Send coupon today for this practical plan. No salesman will call.

**SEND COUPON FOR FREE BOOK**

FOLEY MFG. CO., 148-9, Foley Bldg. Minneapolis 18, Minn.

Send me free book "Money Making Facts" and Time Payment Plan.

Name _____

Address _____

**HANG FIXTURES SECURELY... USE MOLLY Screw Anchors and JACK NUTS**

PERFECT FASTENERS to hold anything on walls, floors, ceilings

With Molly you can install fixtures exactly where you want . . . not just where studs are. Won't pull through. Spider backing reinforces area in which used. Fixtures can be removed and replaced in same anchor. Easy to install without disfiguring wall. Inexpensive, guaranteed. Ask your hardware dealer for genuine Molly . . . the name is stamped on the cap.

**New JACK NUTS HOLD IN HOLLOW-CORE FLUSH DOORS**

Now you can fasten fixtures securely to flush doors! Jack Nuts need only ¾" expansion space, grip any material up to ¾" thick.

SEND $1.00 FOR SAMPLE BOX OF 12

EXPANDING BUMPER WALL MOLLY Corp. • 211 N. 5th St. • Reading, Pa.

Enclosed is $1.00 for sample box of (check one) ☐ Mollys ☐ Jack Nuts

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____


## The '59 Plymouth

[*Continued from page* 150]

allow you to eke out a few extra rpm and probably whack off a bit from that 0-60 time of 8.2 seconds.

Plymouth, in this writer's opinion, has suffered somewhat in its transformation from a dowdy, sensible little car to a gutsy glamor gal of today. Back in the '30s and '40s the same "Plymouth" seemed to be just right but today it may be a bit of a handicap, somewhat similar to putting a moniker like Hermione Schultz on Brigitte Bardot. You may think this is unimportant but I don't. "Plymouth" subconsciously makes you think of Pilgrims, buckle shoes and John and Priscilla Alden—but it doesn't conjure up the picture that names such as Buffalo Bill, Wild Bill Hickok or even Robin Hood bring to mind. Gutsy names usually go with gutsy cars, such as Stutz, Duesenberg, Mercedes and even Jaguar. If I had the say I'd play down the name Plymouth and build up the name Fury. I mentioned this to a high company official and he agreed with me.

**Twenty-eight per cent** of all '58 Plymouths sold were station wagons. This figure might have been higher if there had been more station wagons available. I have three close contacts who tried to buy Plymouth wagons but switched to the competition when they were told they'd have to wait anywhere from six weeks to three months for delivery. I'm told this condition will be cleared up in 1959. As we wrote last year, the Plymouth station wagon was not only the biggest in its field but as big as any made in the country, with exactly the same carrying capacity as the Chrysler New Yorker wagon, costing a great deal more.

In summing up, as this is written I've already tested 75 per cent of the new cars and I've tested all the '59 cars in Plymouth's price bracket. In my opinion, the 1959 Plymouth is an outstanding buy—good-looking, comfortable, able and by far the best in its field in all departments which include performance, comfort and, most important of all, safety and roadability. •

When answering advertisements please mention MECHANIX ILLUSTRATED

# FOR REPAIRING ALL ELECTRICAL APPLIANCES MOTORS ★ AUTOMOBILES ★ TV TUBES

*Superior's New Model 70 UTILITY TESTER®*

***As an electrical trouble shooter the Model 70:***

- Will test Toasters, Irons, Broilers, Heating Pads, Clocks, Fans, Vacuum Cleaners, Refrigerators, Lamps, Fluorescents, Fans, Switches, Thermostats, etc.
- Will test all TV tubes for open filaments, inter-element shorts, burned out tubes, etc. (Will not test TV tubes for quality. An omission type tester such as the model 82, described below, is required to test tubes for quality.)
- Measures A.C. and D.C. Voltages, A.C. and D.C. Current, Resitances, Leakage, etc.
- Will measure current consumption while the appliance under test is in operation.
- Incorporates a sensitive direct-reading resistance range which will measure all resistances commonly used in electrical appliances, motors, etc.
- Leakage detecting circuit will indicate continuity from zero ohms to 5 megohms (5,000,000 ohms).

***As an Automotive Tester the Model 70 will test:***

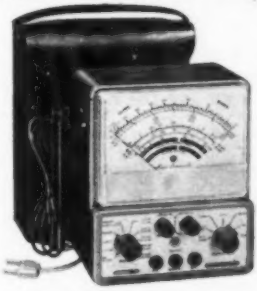
- Both 6 Volt and 12 Volt Storage Batteries • Generators • Starters • Distributors • Ignition Coils • Regulators • Relays • Circuit Breakers • Cigarette Lighters • Stop Lights • Condensers • Directional Signal Systems • All Lamps and Bulbs • Fuses • Heating Systems • Horns • Also will locate poor grounds, breaks in wiring, poor connections, etc.

***Model 70 comes complete with 64 page book written in plain easy-to-understand language. Explains law of electricity, how to proceed with repairs of appliances and automobile circuits, how to test TV Tubes, etc.***

**Only $15.85**

---

*Superior's New Model 79* **SUPER METER - WITH NEW 6" FULL-VIEW METER**



## *A Combination* VOLT-OHM MILLIAMMETER
## *Plus* CAPACITY, REACTANCE, INDUCTANCE, AND DECIBEL MEASUREMENTS
## *Also Tests* SELENIUM AND SILICON RECTIFIERS, SILICON AND GERMANIUM DIODES.

The model 79 represents 20 years of continuous experience in the design and production of SUPER-METERS, an exclusive SICO development. It includes not only every circuit improvement perfected in 20 years of specialization but, in addition includes these services which are "musts" for properly servicing the ever-increasing number of new components used in all phases of today's electronic production.

**SPECIFICATIONS:**

- **D.C. VOLTS:** 0 to 7.5/15/75/150/750/1,500.
- **A.C. VOLTS:** 0 to 15/30/150/300/1,500/3,000
- **D.C. CURRENT:** 0 to 1.5/15/150 Ma. 0 to 1.5/15 Amperes
- **RESISTANCE:** 0 to 1,000/100,000 Ohms, 0 to 10 Megohms.
- **CAPACITY:** .001 to 1 Mfd., 1 to 50 Mfd.
- **REACTANCE:** 50 to 2,500 Ohms, 2,500 Ohms to 2.5 Megohms.
- **INDUCTANCE:** .15 to 7 Henries, 7 to 7,000 Henries.
- **DECIBELS:** —6 to +18, +16 to +38, +34 to +58.

The following components are all tested for QUALITY at appropriate test potentials. Two separate BAD-GOOD scales on the meter are used for direct readings.

All Electrolytic Condensers from 1 MFD to 1000 MFD.
All Selenium Rectifiers.
All Silicon Rectifiers.
All Germanium Diodes.
All Silicon Diodes.

***Model 79 comes complete with operating instructions and test leads. Use it on the bench—use it on calls. Only . . .*** **$38.50**

# SHIPPED ON APPROVAL

## *NO MONEY WITH ORDER — NO C.O.D.*

**Try any of the above instruments for 10 days before you buy. If completely satisfied *then* send down payment and pay balance as indicated on coupon. *No Interest or Finance Charges Added!* If not completely satisfied return unit to us, no explanation necessary.**

**MOSS-ELECTRONIC, INC.**
**Dept. D-554, 3849 Tenth Ave., New York 34, N. Y.**

Please send me the units checked on approval. If completely satisfied I will pay on the terms specified with no interest or finance charges added. Otherwise, I will return after a 10 day trial positively cancelling all further obligation.

Name .....

Address .....

City ..... Zone ..... State .....

All prices net. F.O.B., N.Y.C.

☐ Model 70 .....Total Price $15.85
$3.85 within 10 days. Balance $4.00 monthly for 3 months.

☐ Model 79 .....Total Price $38.50
$8.50 within 10 days. Balance $6.00 monthly for 5 months.

# FREE FISHING CATALOG

"How to choose and use your Tackle"

BY WORLD CHAMPION CASTER AND VETERAN FISHERMAN BEN HARDESTY

"Use the right tackle, *Catch More Fish!*" says the champ

Complete fishing catalog on tackle selection and assembly with helpful tips by world champion caster Ben Hardesty. Shows you all the latest tackle for fly fishing, bait casting, spinning, salt water and exciting new push-button fishing. 32 value packed pages, plus 1959 pocket fishing calendar by Joe Godfrey showing best fishing days. Best of all, it's all free. Your gift from Shakespeare to help you catch more fish, have more fun fishing. Send coupon today.

**EASY CASTS—QUICK AS A FLASH WITH PUSH-BUTTON MAGIC!**

Just a push of the button—s-w-i-s-h of the rod . . . PRESTO—PUSH-BUTTON FISHING! Make long, easy casts every time without backlash.

**No. 1797 NEW** heavy duty level-wind model with approx. 90 yds. 12-lb. line . . . **$24.95**

Shakespeare PUSH-BUTTON WONDERCAST

**SHAKESPEARE CO., Dept. MI-1, Kalamazoo, Mich.**

Please send me absolutely free your brand new 1959 fishing tackle catalog by world champion Ben Hardesty with pocket fishing calendar.

Name_____

Street_____

City_____ State_____


## Mail Order Experts

*ontinued from page 81]*

business rupted after World War II and is still giving off golden sparks. There are many others beside Joe Cossman proving that money can be made in one of the few remaining major businesses in which a fellow can make a strike with limited capital.

What's new in this intriguing business? What are the red-hot items these days? Who goes broke and who hits the jackpot? And why?

I put these and many other questions to leading mail order experts in many parts of the country. Here are some of the know-how secrets revealed by these top mail order experts.

*What are the most popular mail order items being sold today?*

The best-selling items today are unusual automobile accessories, industrial equipment, giftware and novelty items, reports Irvin Graham, one of the top mail order specialists.

*Which of these items is the best?*

Nobody can definitely predict a hit but the best sellers today are the offbeats, the novelties.

Joe Cossman's imitation shrunken head is a good example of an offbeat item. A Long Island manufacturer offers left-handed scissors! A New Yorker is marketing a gold toothpick. For sunbathing girls, a Chicago outfit has come up with a beautifully jewelled nose guard.

*Are there any "sleeper" fields for mail order selling?*

Yes. It's food. The secret lies in providing deluxe items, gourmet foods and specialties that folks cannot get in local food markets.

What's being sold? Specialties ranging from Grandma's gefulte fish to *escargots a la francaise* (snails). Customers clamor for such tidbits as pickled artichoke nubs, cucumber marmalade, wild pheasant, curried walnuts, almond paste pretzels, a hundred exotic cheeses, canned fried grasshoppers and caviar.

*How big is the mail order business and how much has it grown in the last few years?*

It's a fantastically large enterprise. Economic reports reveal that the sell-by-mail business is rapidly creeping up on de-

partment stores sales. Total mail order sales for the last recorded year was $1,407,000,000, one-eighth of all department store sales throughout the country.

*What have successful mail order men discovered about the price of items?*

Although cheaper items (between $1 and $5) are the safest bet, higher priced goods are finding excellent markets.

Four years ago, for example, Charles Schonbrun of New York decided to try selling by mail. Charles was a beginner, so he didn't know the rules. He didn't know, for instance, that you weren't supposed to sell anything costing more than a few dollars. He struck it rich when he decided to sell fine cutlery, ranging up to $26 a set.

Charles' experience is by no means unique. Mail order businessmen are selling boat kits costing hundreds of dollars, tractors, costly telescopes and binoculars, floor saws, entire electrical plants, lawnmower sharpeners, plows, even put-it-together-yourself houses costing many thousands!

*Are there any new markets to tap in mail order today?*

Yes. The GI market. Many experts in the field are convinced that this is a potential billion-dollar market. A few smart chaps have already discovered that they can actually sell new model cars to American soldiers stationed overseas, and deliver the cars when the men are shipped back to this country!

*Where can beginners get sound advice on how to start, do's and don'ts, etc., of the mail order business?*

Highly recommended is How To Sell Through Mail Order, published by McGraw-Hill of New York. Other good books are: Help Yourself To Better Mail Order, Printers' Ink, N. Y.; How To Start Your Own Mail Order Business, Stravon, N. Y.; How To Win Success In The Mail Business, Arco, N. Y.

*Are there any final words of advice?*

The Department of Commerce points out that experience has shown it's advisable for beginners to start a part-time business and to operate from their homes. Bear in mind that casualties run high in this line but the jackpot is there. It has been claimed time and again by the quick and alert. It can be claimed by you, too! •


BUILD THE BEST!
build quality money-saving
knight-kits
A PRODUCT OF ALLIED RADIO

see them all in
ALLIED'S 1959
ELECTRONIC SUPPLY CATALOG

free

BUILD YOUR OWN!
IT'S EASY—IT'S FUN—
SAVE UP TO 50%

HI-FI KITS

452 value-packed pages

HAM KITS

HOBBY KITS

INSTRUMENT KITS

SAVE on Everything in Electronics

WORLD'S LARGEST STOCKS: Everything for Experimenters, Builders, Amateurs, Servicemen, Engineers, Hi-Fi enthusiasts. Get more for your money in Hi-Fi systems and components, including latest Stereo; save on build-your-own KNIGHT-KITS; recorders and tape; Amateur station equipment; TV tubes, antennas, accessories; test instruments; industrial electronic equipment—plus the world's largest stocks of parts, tubes, transistors, tools and books. Send today for your FREE 1959 ALLIED Catalog!

EASY TERMS AVAILABLE

our 38th year

ALLIED RADIO
Everything in Electronics at Lowest Prices

send for FREE Catalog

ALLIED RADIO CORP., Dept. 44-A9
100 N. Western Ave., Chicago 80, Ill.

☐ Rush FREE 1959 ALLIED 452-Page Catalog.

Name_____

Address_____

City_____ Zone____ State_____

STICK WITH LEPAGE'S
TRADEMARK

TAPE AND GLUE

## Have Gun

[*Continued from page* 69]

the stuff as quickly as soldier would burn it up! The cyclic rate is 750 rounds per minute or 12½ per second—which is fast, man, fast!

Of much simpler construction than the M1 and containing far fewer parts, the M14 works on a similar but softer-acting gas expansion system that makes for surprisingly comfortable shooting. Wearing an ordinary business coat over a cotton shirt, with no shoulder pad or other recoil protection, I fired perhaps 100 rounds over a period of an hour and didn't experience the slightest distress. I predict that the GIs who get this rifle will like it very much and will learn quickly to shoot it well.

**As the new shooting iron** of the Armed Forces of the United States, the M14 will replace three existing weapons: the Garand M1, the .30 cal. carbine and the M3 sub-machine or "grease" gun. With a heavier barrel but the same mechanism, the M14 will become the M15 and will replace the Browning Automatic Rifle. •

## Auto Racing

[*Continued from page* 59]

veteran racing official as admitting exactly that!

In a civilized society, can we in full conscience allow a sport to go on when death and maiming is a virtually inevitable by-product—when we *know* and *expect* people to be killed or seriously hurt?

No sensible person denies that enormous

[*Continued on page* 158]

CUT-TO-FIT HOMES CUT COSTS UP TO 40%

Save labor cost up to 100%, reducing completed home cost up to 40%. You can assemble any of 57 designs from easy-to-follow plans. No measuring or cutting . . . every piece precision machine pre-cut and marked. **BUY DIRECT FROM MILL.** Eliminate all between overhead, profit and labor costs. Nothing to plan or figure. Complete with all lumber, hardware, paint, nails, glass, roofing, etc. Sterling Home quality material throughout. Freight paid most areas. Write today. Send 25c for illustrated, color catalog, floor plans and details.

PRICED FROM $2150 UP

CHOICE OF 57 DESIGNS

FIVE EASY-PAYMENT PLANS

INTERNATIONAL MILL & TIMBER CO. Bay City, Michigan, DEPT. MI 19

# SAVE $5 ON CRAFTSMAN PROPANE TORCH KIT

Compartmented Case Includes...

Spark Lighter | Pencil Burner and Valve | Two Cylinders of Fuel | Brass Utility Burner | Brass Flame Spreader | Brass Soldering Attachment

## MAKES DOZENS OF JOBS EASIER!

- Setting Tile
- Soldering
- Splicing Wires
- Car Body Repairs
- Burning Off Old Paint
- Lighting Fireplace
- Refinishing Furniture
- Starting Incinerator
- Sweating Copper Fittings
- Removing Putty
- Thawing Frozen Pipes
- Loosening Frozen Nuts

You'll find so many uses for your Craftsman Propane Torch this winter you'll wonder how you ever got along without it. Chores and repairs that were too hard to do before now become easy! The Craftsman Propane Torch is as simple to light as a gas stove—no filling, no pumping, no priming. Safe, too, it lights or burns in any position—even upside down! (UL listed.) Carry the kit to your work—accessories are always with the torch, handy and in place. Get this Craftsman kit now and save $5 during Sears January Special!

SEARS ROEBUCK AND CO.

*Buy this Craftsman Torch Kit at your nearest Sears Retail Store or Catalog Sales Office... or through Sears Catalog at home.* In Canada at Simpsons-Sears Ltd. Retail Stores

SOLD ONLY AT SEARS...SATISFACTION GUARANTEED OR YOUR MONEY BACK

© 1958, SEARS, ROEBUCK AND CO.

FACTORY TO YOU SAVES $150.00
SUPERSHOP Model X

WE PAY ALL FREIGHT FOR YOUR FREE HOME TRIAL

5 Big Power Tools in ONE!

- 8" Saw
  Vertical Drill Press
  Horizontal Drill Press
  8" Sander
  5" Grinder
  30" Lathe

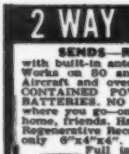
Never before so much deluxe, precision-built power tool workshop at any price. Yours for as little as $13.95 down! Full price only $139.50. Mail coupon today for FREE colorful brochures, photos, specifications, accessory list — and full details of amazing freight-prepaid FREE HOME TRIAL PLAN.

Power Tools Division
UNITED INDUSTRIES, Inc.
815 Yates Avenue, Beloit, Wisconsin

Name_____
Address_____
City_____ State_____

2 WAY PORTABLE RADIO SET

SENDS—RECEIVES UP TO 10 MILES AS SHOWN with built-in antenna or hundreds of miles with outside antenna! Works on 80 and 40 meter (Novice) amateur radio-bands—also Aircraft and overseas broadcast (3 to 8 mc). PORTABLE SELF-CONTAINED POWERED WITH STANDARD PORTABLE RADIO BATTERIES. NO AC PLUG-INS NEEDED! Take it with you everywhere you go—on trips, vacations, camping—Keep in contact with home, friends. Has 3 watt crystal controlled transmitter—Sensitive Regenerative Receiver. Send-Receive switch. Wt., only 3 lbs. Size, only 6"x4"x4". TESTED—PROVEN—SIMPLIFIED—PRACTICAL—Full information given on quick easy to get license.



SEND ONLY $3.00 (bill, ck, mo) and pay postman $12.95 COD postage on arrival or send $15.95 for postpaid delivery. Complete kit includes all parts, tube, coils, cabinet, easy instructions. (Set of batteries $3.40; crystal $1.98) COMPLETELY WIRED AND TESTED POSTPAID $19.95. A regular $49.95 value—GUARANTEED—AVAILABLE ONLY FROM: WESTERN RADIO, Dept. SNI-1, Kearney, Nebr.

SAVE MONEY on LUMBER
with the LOW-COST
BELSAW PLANER

- Convert Rough and Random Size Lumber Into Cabinet Finished Stock

Now anyone can make perfect cabinet finished stock from low-cost rough lumber... any size up to 12¼ inches wide and 6 inches thick. Turn out high grade finished material at a fraction of the cost you pay lumber yards. Big 42-inch-long bed makes it easy to plane heavy, wide and long pieces... BELSAW self-feeds at 14 to 34 feet per minute.

USE THIS ONE LOW-COST MACHINE for Planing, Jointing, Sawing, Milling, Tongue and Groove.

You can easily make flooring, siding and many other popular patterns with your Belsaw. Your Belsaw quickly pays for itself with savings on raw materials and profits on finished stock ... a highly profitable machine for custom work. Compare Belsaw with any 12-inch planer on the market... Belsaw gives you more essential features—yet costs you $50 to $125 less than others.

Send Today for Free Literature on the Belsaw Multi-Duty Planer.

BELSAW MACHINERY CO. 2049 Field Bldg. Kansas City 11, Mo.

## Auto Racing

[*Continued from page* 156]

peril exists for drivers of cars who roar around tracks at great speeds and jockey wildly for positions. Anything can happen as tires and brakes, vital to safety, take gruelling punishment. If it doesn't happen, Providence alone can be thanked.

**And now we come to** still another danger—the risk to the spectator. Fortunately, we have not had any catastrophe in this country similar to the flaming death which snuffed out the lives of 82 persons at the famous 24-hour Le Mans race in 1955—not yet.

But are we absolutely certain it can't happen here?

Professor Lafore of Swarthmore makes this chilling assertion in Harper's: "The special horror of Le Mans was the product of special circumstances *but something like it might happen anywhere.*" The italics are mine. Lafore points out:

"It is clear that the designers and engineers have created a degree of power and speed which leads by a lap or two the driving ability, safety precautions and organizing power of human skill."

**I'll ask this question:** In all the auto racing tracks of the country, are the spectators completely and sufficiently safeguarded against disaster such as befell the onlookers at Le Mans that tragic day? Is there no possibility that such a catastrophe could be repeated in one of America's races?

The world won't ever forget what occurred at Le Mans. Approximately 250,000 persons were watching the race. About three hours after the contest began, an Austin-Healey driven by Great Britain's Lance Macklin swerved to avoid a Jaguar driven by Mike Hawthorn. Coming down fast was Pierre Levegh, driving a Mercedes.

The Mercedes couldn't veer or brake in time. It struck the Healey in the rear left corner and took off crazily. It hit an earthen embankment on the side of the track and somersaulted over and over for dozens of yards. The driver was hurled out and instantly killed. As it spun, the car exploded and pieces flew into the crowd like a fragmentation bomb.

The effect was devastating. About 20 persons were mercilessly decapitated by

the flying hood. The engine and front axle hurtled into another section and killed dozens more. Others were burned to death as the car's flaming body descended on them. The toll: 82 dead, 78 injured.

Could it happen here?

**I think that if we cannot** answer that question with an unqualified *no*, we are not justified in permitting the continuance of this sport in our country.

Why wait until a disaster happens before we clean house? If, through the tragedy that came to another nation, we have been taught a sobering lesson, isn't it foolhardy not to pay attention?

There's a tragic footnote to the Le Mans horror. The French authorities took all sorts of precautions for the following year. With all the precautions, a man was smashed to death and some dozen cars crashed, flipped and skidded. This year's race was no better. The crackups followed one after the other. One driver hit an embankment head-on. He caromed off as another came up. The driver of the first car was killed.

**I am primarily concerned** over the adverse impact of automobile racing on the psychology and attitude of youthful Americans. Racing tends to glamorize speed and dare-deviltry in automobile operation, an attitude completely at odds with efforts to install safe-driving principles in the minds of young drivers. Hundreds of thousands of dollars are spent on safety campaigns. How much of this is dissipated by the adverse psychological impact of auto racing on young minds?

There is something else about automobile racing which worries me. America is gradually becoming a nation of spectators. I would rather see Americans engage themselves in hiking, golfing, camping and bicycling than watching a handful of men —and even women—risk their lives wheeling racing cars around a track. The President's Conference on Physical Fitness has demonstrated worry over the health, stamina and athletic prowess of most Americans—and I share this concern.

However, there are some bright spots in the picture. Already the most hazardous of all types of racing, the "open road" kind, has been practically abandoned in this country. These, as the name implies, are held over public highways, with spectators

[*Continued on page* 161]


Only a Ready-Cut
Liberty Home
offers you so much

Space. Quality. Beauty

**57 EXCITING DESIGNS FROM $2465 TO $7926**

For less money, there's more of everything in a spacious Ready-Cut Liberty Home. And so many designs to choose from including split levels, rambling ranch homes with 2, 3 or 4 bedrooms . . . 1 or 1½ baths . . . for wide or narrow lots.

**BE YOUR OWN CONTRACTOR SAVE THOUSANDS OF DOLLARS**

It's so easy to direct the construction of your own Liberty Home, saving as much as $5000 and more. You save on labor, material and contracting costs . . . and there are no salesman or architect fees.

**FINEST QUALITY MATERIALS**

Liberty Home materials are selected top quality, kiln-dried and machine cut to exact size for perfect fit. You receive ready-to-assemble materials including all framing and finish lumber, siding, nails, paints, hardware, windows, doors, flooring . . . plus complete building plans.

**IRON-CLAD GUARANTEE PROTECTS YOU ABSOLUTELY**

You are guaranteed, in writing, to receive the highest quality materials in sufficient quantity to complete your new home . . . assuring your full satisfaction.

**Financing Is Easy With Our Exclusive Plan**

**Materials Shipped Freight Prepaid**

Send 25c for
EXCITING 56-PAGE
FULL COLOR CATALOG

MAIL TO:
LIBERTY READY-CUT HOMES
6891 Lafayette Ave., Bay City, Mich.

NAME_____

ADDRESS_____

SAVE $$$

# U.S. GOV'T. SURPLUS

Look at the amazing bargains that have been made!

| | |
|---|---|
| LIFE BOAT | $12.00 |
| TRACTOR | 75.00 |
| TYPEWRITER | 7.51 |
| FREEZER | 50.00 |
| SPRAY PAINTER | 15.25 |
| MOTOR | 4.00 |

**PAY AS LITTLE AS 1¢ ON THE DOLLAR** for Hunting, Fishing, Camping, Sporting Equipment; Photographic Equipment and Supplies; Radio and Electronic Equipment; Amphibious Trucks, Jeeps, Boats, Motors, Binoculars; Plumbing, Electrical Equipment; Cars, Power Tools, Machinery, Chemicals, Furniture, Office Equipment and Supplies, Scrap, etc. Our dated bulletin, "Government Surplus Sales," lists hundreds of valuable surplus items for direct purchase from U. S. Government by sale, bid, auction. THIS IS NOT A DIRECTORY OF DEPOTS but a current listing of immediately available merchandise. Rush $1.00 today for latest bulletin (or $2.00 for 3 issues; $8 for 12). **GOVERNMENT SURPLUS SALES, P.O. BOX 168, Dept. MI-19, East Hartford, Conn.**

**Everything for the Craftsman!**

WRITE FOR NEW 132 PAGE

# WOOD

AND HOME WORKSHOP **CATALOG**

**Finest Domestic and Imported Woods . . . Mouldings, Hardware, Tools . . . ALL AT LOW MONEY-SAVING PRICES!**

Your complete wood buying guide and project book. Craftsman is your best, most complete source of finest kiln-dried domestic and rare imported woods, beautiful wood inlays, colorful bandings, matched plywoods, embossed mouldings, carved ornaments, newest woodworking tools, "hard to find" cabinet hardware and fittings . . . more than 1500 items! Packed with newest scroll saw patterns, project ideas and money making plans. Enclose 25c (refunded with first order) to help pay mailing, handling cost. Write:

Upholstery Materials; How Tools; Lamp Parts; Metal and Wood Legs; Cabinet Hardware; Music Boxes; Archery and Water Ski Kits. Over 1500 Items

**CRAFTSMAN WOOD SERVICE COMPANY, Dept. G-1**
**2729 SOUTH MARY STREET - CHICAGO 9, ILLINOIS**

# KING MIDGET

More power, beautiful styling. New Features. Still World's Lowest Priced Car. Drive it for 75c a week. Rider agents wanted. Earn your own car.

**2 GREAT AUTO BARGAINS**

King Midget Junior chassis, finely engineered, ready to run. Agents wanted. Send 25c for 32 page picture book, full details, dealers price on both cars. Or send $1 (refunded first order) for this and Service Manual, plus Repair Manual and 15 5x7 photos of car and factory.

**MIDGET MOTORS CORPORATION, ATHENS 3, OHIO**

**EXCLUSIVE DOUBLE-BEARING**
# HEAVY DUTY PUMPS

IRRIGATE • DRAIN • CIRCULATE • SPRAY

Use ¼ HP motor or larger. . . . 1 HP for up to 7,500 GPH; 1,000 GPH 60' high; or 3,000 GPH from 25' well. 1¼" inlet; 1" outlet. Stainless shaft. TYPE X—**$10.95**
2 oil-less bronze bearings. Won't rust. . . . .
TYPE XB—Ball bearing model. **$12.95**
Best for belt drives. . . . . .
*Postpaid if cash with order. Don't delay—send for yours today!*
MONEY BACK GUARANTEE
Centrifugal and Gear Pumps in All Sizes
**LABAWCO PUMPS, Belle Mead 29, N. J.**

# "MINIATURE MACHINE SHOP

**No Bigger Than A Typewriter, Outperforms Machines Many Times Its Size!"**

That's what Mechanix Illustrated says about UNIMAT in their 3 page feature story in the May issue. If you want a reprint of this story plus complete information about this amazing 10 in 1 combination precision tool write to:

**AMERICAN EDELSTAAL, INC., UNIMAT DIV. Dept. MI-1, 350 B'way., N. Y. 13**


STATEMENT OF OWNERSHIP

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF MECHANIX ILLUSTRATED published monthly at Greenwich, Conn., for October 1, 1958.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Fawcett Publications, Inc., Greenwich, Conn.; Editor William Parker, New York City; Managing Editor, Ralph Daigh, Pelham Manor, N. Y.; Business Manager, Gordon Fawcett, Greenwich, Conn.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Fawcett Publications, Inc., Greenwich, Conn.; W. H. Fawcett, Jr., Norwalk, Conn.; Marion Bagg, Overland Park, Kansas; Roger Fawcett, New York, N. Y.; V. D. Fawcett, Greenwich, Conn.; M. B. Fawcett, Norwalk, Conn.; Gordon W. Fawcett, Greenwich, Conn.; Gloria Leary, Santa Monica, Cal.; V. F. Kerr, Bakersfield, Cal.; Mrs. Eva Roberts, Seattle, Wash.; H. A. Fawcett, New York, N. Y.; Roscoe Kent Fawcett, Reno, Nevada; M. F. Fawcett, Greenwich, Conn.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) NONE.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

GORDON FAWCETT,
Business Manager

Sworn to and subscribed before me this 30th day of September, 1958.

[SEAL] LILLIAN M. KLEIN

(My commission expires April 1, 1963)


WELD, BRAZE

SOLDER, CUT

# ANYONE CAN WELD AT HOME

Homeowners, mechanics, farmers, hobbyists! Make repairs at home, farm or shop on fenders, bodies, bicycles, machinery—almost anything of metal. No experience needed. Welder comes complete with twin carbon arc-torch and accessories at low, low price. Operates from any properly wired 110 V. A.C. or D.C. line. Order from this ad. 10 day money back guarantee. Literature on larger equipment FREE.

**FOUR-WAY WELDER CO., Dept. F4-A, 1910 S. Federal St., Chicago 16**

FOUR-WAY WELDER of 1001 uses only $14.75 F.O.B. FACTORY

## Auto Racing

[*Continued from page* 159]

lining the roadsides as the cars zoom by.

**If we need any evidence** that we've done the right thing by abandoning open road racing here, all we have to do is look toward Europe. It was just a year ago last May that Marquis Alfonso de Portago was streaking along during the Mille Miglia when either a tire blew or an axle broke. His car, a Ferrari, swerved, uprooted a milestone and crashed into a telephone pole.

An instant later, de Portago and his co-driver were dead. But the horror was far worse. The car had smashed into the dense crowds that lined the road and killed 13 spectators, some of them small children.

If this isn't enough to convince us we've done right, then all we need do is look toward Cuba. Last March, during the 315-mile Gran Primo de Cuba race, a young driver took a shallow turn, skidded and ran into a crowd. In a moment, seven were dead and 31 injured.

**There is another bright spot** in the American auto racing picture. In 1957, the Automobile Manufacturers Association recommended that its member companies (General Motors, Ford, Chrysler, Studebaker-Packard and American Motors) cease all participation in car racing. The AMA directors, meeting in Detroit, recommended in a resolution that the companies no longer enter cars in the various competitions held throughout the country, including stock car racing.

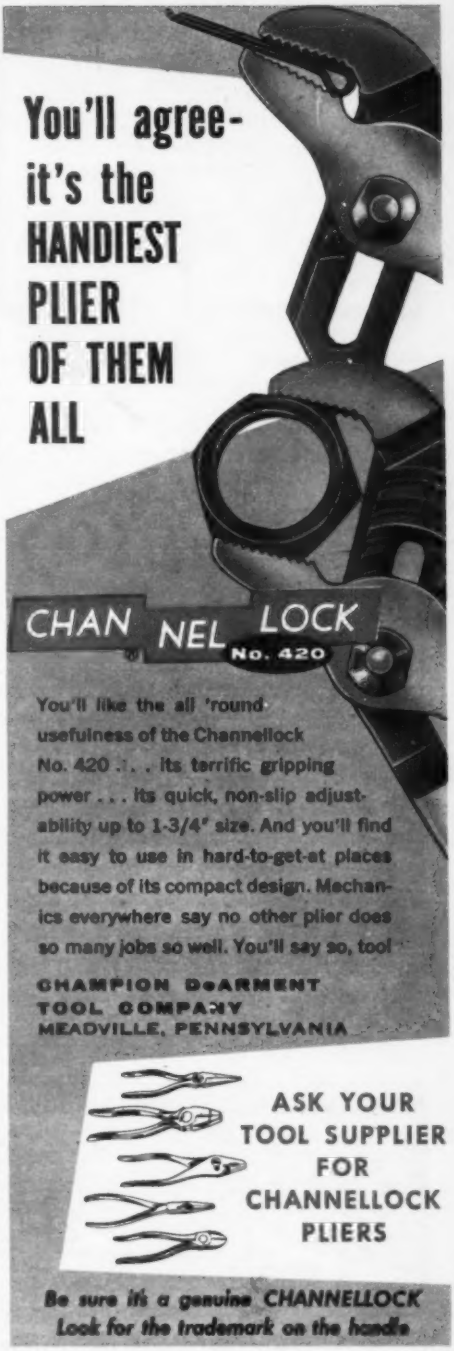
And this brings up one final point.

Promoters of auto races say that these contests are essential to the technical development of various advances in car construction. They assert it's necessary to run racing cars at great speeds in order to test new devices and gadgets for general use in passenger vehicles.

I challenge this ridiculous claim.

**Even if this should be true,** isn't it perfectly obvious that the necessary high speeds can be achieved without running 20 or 30 cars simultaneously around a narrow track before huge audiences of spectators?

If high speed is the main thing, why not run each car against the clock, but alone on the track? In this way, the high speeds allegedly so vital to technical improvements in vehicles would be achieved and

# SAVE 1/2 OR MORE

*Build this six transistor portable radio*

No other portable gives you so many features at such a low price: 4" x 6" speaker, 500 to 1000 hr. battery life, two-tone molded plastic case, plus high quality, all-transistor circuit.

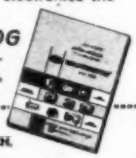
**$29.95**

***IT'S EASY, FUN, EDUCATIONAL***

No special tools or skills required.
Clearly illustrated step-by-step instructions guarantee your success—and you learn about electronics the easy way—BY DOING!

***SEND FOR FREE CATALOG***

..... Describing nearly 100 other "do-it-yourself" HEATHKITS for hobby, hi-fi, ham radio or professional.



**HEATH COMPANY**
*pioneer in "do-it-yourself" electronics*
BENTON HARBOR 7, MICH.
*a subsidiary of Daystrom, Inc.*

name _____
address _____
city & state _____

# 1000's of ITEMS in WOODS

Tools, Materials & Supplies

THIS BIG, new 126 page catalog and "how-to-do-it" book has everything for the woodworker and hobbyist, all at lowest prices. Complete source of supply for fine, rare imported and domestic woods, veneers, turning blocks and squares. Inlays, bandings, mouldings, carvings, upholstery supplies and wood finishing materials, hand and power tools. Thousands of items to choose from. Unusual hardware for every purpose. Exclusive wood identification chart of over 60 woods named and reproduced in natural color. Hundreds of illustrations, "how-to-do-it" articles, projects and plans.

**FREE** 25¢ WOOD FINISHING MANUAL with your copy of our Catalog for Craftsmen. Send only 50¢ today (refunded on 1st order), and will include FREE with your copy of our big catalog our special 25¢ wood finishing book. Write today!

**ALBERT CONSTANTINE AND SON, INC.**
2060-G Eastchester Road New York 61, New York.

# WORLD WIDE SHORT WAVE RADIO

**HEAR THE WORLD!—ANYTIME—ANYWHERE**

Hear Europe, Africa, Russia, Australia, South America—ANYWHERE IN THE WORLD ANYTIME! Gets ALL foreign radio stations .55 mc. to 42 mc. Not much larger than a postcard—Wt. only 4 lbs! Gets regular American stations—All Radio Amateur bands—Ships at sea, Airplanes, Police, Citizens Radio—Most Everything! NOTHING LIKE THIS MIDGET ALL-WAVE RADIO ANYWHERE ELSE EVEN AT $100.00! No AC plug-ins needed. Wonderful for home, traveling, scouting, Radio Amateurs—EVERYONE! YOU'LL HEAR THE WHOLE WORLD TALKING!

**SEND ONLY $8.00** (cash, ck, mo) and pay postman $24.95 COD postage on arrival or send $29.95 for postpaid delivery. (USA only). COMPLETE WITH BUILT-IN SPEAKER AND DIE STAMPED METAL CABINET, pull-out antenna, all tubes, broadcast coil and set of self-contained, long life batteries. READY TO OPERATE! NOTHING ELSE TO BUY! Guaranteed! AVAILABLE ONLY FROM:

WESTERN RADIO Dept. SPI-1 KEARNEY, NEBR.


90 per cent of the hazard would be eliminated, because the danger comes principally from crashes.

Of course, this would also automatically eliminate something else—much of the thrill and excitement—and therein lies the reason for the promoters' opposition to such a reform. They know crowds flock to the tracks not merely to watch speed but because death rides with the drivers and there is the possibility of seeing wrecks. If speed alone were desired, cars could race individually against time and in comparative safety.

**We live in a civilized nation.** I think we must obey the standards of a civilized nation. Automobile racing, whether by racing cars, sports cars or stock cars, challenges these standards.

We don't legalize bull fights and cock fights for the thrills they give to spectators and the profits they make for promoters. I believe auto racing falls now in the same category. It should be outlawed! •

## *Coast To Coast*

[*Continued from page* 91]

avoid reducing gears, which would have burned more gas under all but the most extreme conditions. Over the peaks I'd let momentum take over and would get up to as high as 60-65 with a partly-open throttle to avoid sucking raw gas into the manifold.

**This process was repeated** 100 times that first day. Then came another nasty twist—the temperature in Yuma, Ariz., where we stopped for lunch, was a flat 104° F. We had been driving with all the windows rolled up, except for a slight crack of the side vent and driver's window. Open windows can rob quite a bit of gas and there was nothing in the book that said I couldn't be a bald-headed eccentric and ride with them closed, even though the temperature was 104°. Needless to say, we didn't have air conditioning. We did, however, consume salt pills like peas at a banquet.

Our first night's stop was on the outskirts of Tucson. Our average speed for the day had been 43.2 mph and our gas consumption was 22.3 miles per gallon. The next three days were really tough as we bucked headwinds of 18-24 mph and heavy rains, both of which bit hard into our miles-per-gallon average. The prevailing winds are supposedly from west to east

but this was one time they picked to reverse direction. We fought headwinds and heavy rain all the way to Abilene but managed to keep our average still above 22 mpg. On only three occasions did we gas up at midday, as these cars can do well over 400 miles on a 20-gallon tankful.

**Gassing up soon became** a ritual like watching all your money run on one horse. The gas tanks were sealed, so at each gas stop Freil had to break the seal and another official handled the hose until the tank appeared to be full. The cap was then replaced and the car was rocked from side to side by several volunteers to work out any air bubbles. The hose would then be put into the tank again. Oddly enough, after this rocking you could usually squeeze four- or five-tenths of a gallon more fuel into the tank. Then it was finally sealed and the mileage and exact number of pennies spent for the gas was recorded.

Gas prices ranged from 37.4 to 29.9 cents per gallon of regular, depending on the state and area. We were careful not to use the same brand of gas twice in a row. We also always bought what are considered standard brands.

**After the first day or two,** McMichael and I developed a technique of anchoring our gas foot between the gas pedal and transmission tunnel. We rarely moved our foot up and down but rolled it to the left for more gas and to the right for less.

When we hit downtown Dallas, the Texas State Fair was in full progress and it was then that I recalled asking the Pontiac boys, "How about driving through the big cities at night?" In an hour we progressed hardly ten miles. In three and a half hours we hit 174 traffic lights and later that evening, as we came into Shreveport, La., we found that city jammed to the hilt. This did two things to the economy run: it cut deeply into our gas economy and knocked all hell out of our average speed. Before getting into the Dallas hassle we found that, for the preceding 400-plus miles, we had averaged 23.3 mpg. This was the best figure of the trip. The brightest spot of the day, though, was pulling into the LaSands Western Hills Motel just east of Shreveport. This was the most lush motel I've ever been in.

[*Continued on page* 165]

BUY GRAVELY For
•MORE PERFORMANCE!
•MORE POWER!
•MORE FOR YOUR MONEY!

Why plow with equipment you have to push, pull and help? Gravely and its Rotary Plow attachment tills a perfect seedbed in one operation! . . . Gravely does the tough jobs other tractors can't, because Gravely has that extra power you need—6.6 Horsepower!

30 YEAR-ROUND TOOLS GIVE YOU UNMATCHED PERFORMANCE!

Choose the tools that fit your jobs, all powered by one Gravely tractor! You'll do the job better, because Gravely is all muscle. Power attachments driven direct from engine by splined steel shafts and gears. No belts or chains to slip, wear or break. More power at the working tool! . . . A Free Demonstration by your local sales and service representative will prove that Gravely will do your jobs better, faster, easier!

FREE 24-PAGE BOOKLET
WRITE TODAY FOR BIG ILLUSTRATED BOOKLET, "POWER VS. DRUDGERY."

GRAVELY TRACTORS, INC.
P.O. BOX 603-A DUNBAR, W. VA.
EASY PAY PLAN

# PAY 1¢ on the DOLLAR
## for 1000's of Useful Items of
# U. S. GOV'T SURPLUS

**LOOK AT THE LOW, LOW PRICES**

| | | | |
|---|---|---|---|
| Jeeps | $223 | Tractors | $68 |
| Trucks | $212 | Motors | 994 |
| Boats | $5.90 | Airplanes | $366 |
| Fork-lifts | $197 | Typewriters | $6.80 |
| Compressors | $9.69 | Generators | $8.78 |

**PAID AT GOV'T SURPLUS SALES**

You BUY DIRECT from U. S. Government at TREMENDOUS savings. Eliminate middlemen—Save BIG MONEY! Pay as LOW as 1c on the dollar or less. Our Directory Gov't Surplus Sales lists 100's Army, Navy, Air Force Gov't Surplus Depots. Many of them right in your own back yard. BUY JEEPS, sports equipment, hunting, fishing and photographic equipment and supplies, radio, electronic and electrical equipment, trucks, boats, airplanes. Plumbing, hardware, office equipment & supplies. Tools, machinery, furniture. We DO NOT sell jeeps or other surplus. This indexed book tells how to buy Gov't Surplus direct. No dealer profits to pay. Get on the gravy train while you can. Send. $1 TODAY for "Gov't Surplus Directory" to **AVIATION SURPLUS, Dept. M-1, Box 789, York, Pa.**

# "ARCO SCREW-MATIC"

**CONVERTS EVERY ELECTRIC DRILL into a**

## POWER SCREW DRIVER!

## *EXCLUSIVE!*

- Drives biggest screws perfectly everytime because of powerful **Industrial-type Clutch.** Cannot slip, as often happens with friction-type clutches. Clutch disengages automatically when screw is driven home.
- Bit cannot slip off screw head to damage work or hurt operater's hand because of **Special Bit Holder.**

***NO ATTACHMENT UNDER $10.00 HAS THESE 2 FEATURES!***

Includes Phillips Head Bit, ¼" Bit for slotted screws & instructions .... **$5.95**

**At Your Dealer** or order direct - we pay post. No C.O.D. **20-day Money Back Guarantee.**

**ARROW METAL PRODUCTS CO**
**Dept. MI-1, 421 W. 203 St., N. Y. 34, N. Y.**

# PEE WEE BATTERYLESS TUBELESS "LIFETIME" RADIO

**(AMERICAN MADE) GUARANTEED—FOR YOUR LIFE!**

AS LONG AS YOU OWN IT! NO TUBES, BATTERIES, TRANSISTORS OR ELECTRICAL PLUG-INS NEEDED! Will never run down or burn out! SMALLER THAN A PACK OF CIGARETTES! RECEIVES LOCAL RADIO STATIONS ANYTIME—ANYWHERE YOU GO! Easy thumb tuner. NO DANGLING EARPHONES. HAS BUILT-IN SPEAKER PHONE! Black gold plastic cabinet, semi-conductor wave detector. NOT IMPORTED. MADE AND GUARANTEED BY AMERICANS—You can always get service.

**SEND ONLY $2.00** (bill, ck, mo) and pay postman on arrival or send $6.99 for postpaid delivery. SENT COMPLETE READY TO LISTEN WITH LIFE GUARANTEE—NOTHING EXTRA TO BUY EVER! FREE LONG DISTANCE ANTENNA if you order now. Available only from:
**MIDWAY COMPANY Dept. WMI-1 KEARNEY, NEBR.**

# GEARS

**In Stock - Immediate Delivery**

Gears, speed reducers, sprockets, thrust bearings, flexible couplings, pulleys, etc. A complete line is carried in our Chicago stock. Can also quote on special gears of any kind. Send in your blueprints and inquiries.

***Send for Complete Catalog No. 15***

**CHICAGO GEAR WORKS**
**480-90 N. Dudley Blvd., CHICAGO 12, ILL.**

THE ORIGINAL PACKAGED

# BOAT KITS

- World's Largest Line—New Fiberglass Hulls. Over 200 styles Boats-Kits. Formed-Hulls, Semi & Custom finished. All types: Prams, Cruisers, Racers, Inboards, Outboards. Easy to build. Professional results. Dealers-Agents inquire.

**CREDIT TERMS**

**Send 25¢ for 3-Colored Catalogs**
53 pg. Kit Catalog plus 20 pg. Hardware and 8 pg. Armor Glass books.
*(SPECIAL OFFER)*
All 3-colored CATALOGS plus "Boating Handbook"...all for $1.

**CUSTOM • CRAFT**

**★ BOAT PLANS, PATTERNS FRAME PACS**

- Over 400 Plans-Patterns, Frame Pak Kits. Prams, Kayaks, Racers, Runabouts, Catamarans, Cruisers-Inboards-Outboards (6' to 40') Wood, Plywood and Steel. *Send 35¢ for 120 pg. Plans Catalog.* Catalog plus "Boat Building Handbook"... Send $1.00.

**Buffalo 7N, N. Y.**

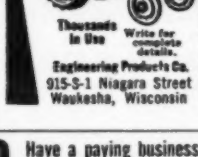
# NEW MAGIC RADIO WALKIE TALKIE

**YOUR OWN POCKET SIZE RADIO STATION!**
**BROADCASTS TO ANY HOME OR CAR RADIO WITHOUT WIRES OR HOOKUPS!** Wt. only 5 oz. Size only 1½"x2½"x 4½". Built-in telescoping antenna. Powerful Transistor—sensitive microphone, frequency setter, break-in switch! Runs for weeks on self-contained flashlight batteries. With this Radio Talkie you CAN TALK TO YOUR FRIENDS UP TO A BLOCK OR MORE AWAY! Talk between two automobiles.—INSTANT OPERATION. Just push button to talk! No license needed. Uses inductive field magnetic radiation. Useful and real fun in a million ways! GUARANTEED TO WORK. 1 YEAR SERVICE GUARANTEE.

**SEND ONLY $3.00** (cash, ck, mo) and pay postman $9.98 COD postage or send $12.99 for prepaid delivery. COMPLETE READY TO OPERATE with instructions and hundreds of ways and tricks for broadcasts thru any radio you desire. Get your NEW RADIO TALKIE NOW. Available only from:
**WESTERN RADIO Dept. NMI-1 Kearney, Nebr.**

SMALL! POWERFUL!

# ECONOMY TRACTOR



**Thousands in Use**

Write for complete details.

**Engineering Products Co.**
915-S-1 Niagara Street
Waukesha, Wisconsin

**Unequalled value! Low price!**

America's finest tractor. Ruggedly built. Easy to operate. 790 lbs. Borg-Warner clutch, trans. and diff. 140 to 1 reduction. 40% more drawbar pull than ordinary tractors 8-1/4 H. P. engine. 20 quick change implements. HOOD, FENDERS.

# HOW TO GET THOSE "BIG PROFIT" WELDING JOBS

(A) Shop Type Transformer (B) Weld and Power Combination (C) Home Work Shop Model

**Have a paying business of your own!**

You're just a step away from a profitable welding business of your own. Hobart has just the unit for you—low cost—real money makers. Machines illustrated give you an idea of the wide selection to choose from. You can also build your own if you desire with a generator only and good used auto engine. Do top quality work right away—welding is in big demand throughout the country. Investigate today. Get complete information. No obligation.

**✔ CHECK HERE**

☐ A ☐ B ☐ C

☐ Build Your Own

Put name and address in margin of this ad and mail.

**HOBART BROS. CO., Box SM-19, Troy, Ohio, Phone FE 2-1223**

## Coast To Coast

[*Continued from page* 163]

**Our next stop was Selma, Ala.** The traffic east of the Mississippi called for severe alterations in our tactics. Hundreds of small towns and many more traffic lights bit deeply into mileage and speed. The one thing I knew, even before becoming an economy driver, was that traffic-light starting could burn up a few cups or a few drops of fuel, depending on how you did it. No drag strip starts here. The throttles were eased down and the car was permitted to gather speed, not awkwardly but not flashily. Never once did we hold up traffic behind us. West of the Mississippi we found that to maintain an average of 40 mph-plus in open country we had to drive at a constant 46-47 mph. East of the Mississippi we found 52-53 mph was necessary.

**After Selma, we ran right** into the mid-morning traffic of Montgomery, Ala., and then Phenix City and Columbus, Ga., which are neck and neck across the river. It was like trying to get through Times Square on New Year's Eve. At our lunch stop at Roberta, Ga., Norm Cheal, Pontiac's navigating engineer, gave us the bad news. This heavy traffic had knocked our average so hard we were actually 22 minutes late. This meant running the last 200-plus miles to Savannah, our destination, at legal speed limits (60 mph) in order to make up the time. We slammed to a stop in front of the Hotel Manger in Savannah with 14 minutes to spare.

Average speed on the 2,442.7-mile trip from the Atlantic to the Pacific was 40.2 mph. Actual driving time was 60.72 hours and we averaged 21.7 mpg. We spent $35.79 for fuel, the cost per mile being less than one and one-half cents.

**With a full-size** American sedan, capable of breaking 100 mph and doing 0-60 mph in less than 11 seconds, we drove from coast to coast for under 36 bucks worth of fuel and, due to the moderate speeds, there was no oil consumption at all. I am positive that by using all the gas-saving tricks I know, we could have averaged better than 25 mpg. •


*Presenting . . . the excitingly new*

**CUSHMAN® SCOOTERS** *for 1959!*

*The Distinctive*

*Super Eagle and Pacemaker*

For fun and excitement—as well as low-cost utility—go Cushman. Distinctive new styling for 1959 plus sturdy new construction features and new mechanical advances all mark the Cushman Super Eagle and Pacemaker as well as their companion machines, the Eagle and Road King. Famous Cushman Husky 4-cycle engine delivers up to 50 miles per hour, up to 100 miles per gallon.

Ask your dealer for a FREE demonstration ride or write for colorful booklet today. Sold and serviced nationally. Replacement parts immediately available.

Dealer inquiries invited

**CUSHMAN MOTORS**
A subsidiary of Outboard Marine Corporation
914 No. 21st, Lincoln, Nebraska
Please send FREE Scooter booklet

NAME _____
ADDRESS _____
CITY _____ STATE _____

ELECTRIC WELD - BRAZE & CUT

REPAIR MOST EVERYTHING MADE OF METAL

Home Appliances, Auto Parts, Farm-garden equipment, toys. Make and repair playground equipment, lawn chairs, tables, ornamental iron work, gates, wagons, etc. Solder, heat, bend, and straighten with terrific heat from arc torch. Cut and weld up to ¼" steel plate. A million uses for Home, auto, farm, inventors, factories, etc. Works from any home 110 volt plug-in. Complete with dark welders mask, arc torch, foot control, supply of carbon welding and brazing rods. Complete Welding Instruction Book. Attractive—portable—efficient—durable—1 year guarantee. SEND ONLY $3.00 (cash, ck, mo) and pay postman only $9.95 plus COD postage on arrival or send $12.95 and we will send postpaid. Ideal gift for mechanically minded home owners, relatives, friends. Order now for early delivery. Available only from:
MIDWAY WELDER Dept. DMI-1 KEARNEY, NEBR.

75 POWER TELESCOPE 25X-45X-75X $3.98

NEW 3 in one telescopes, 3 variable 25X-45X-75X magnification. Brass bound. 25 power for ultra bright images 45 & 75 power for long range. Guaranteed to bring distant stars, moons, objects, sports 75 times closer. Most powerful scope sold anywhere near this amazing low price. American made, 3 sections. Opens 36", closes 1 ft.; contains 4 ground & polished lenses. Can also be used as powerful compound microscope. Mass production enables us to offer telescope complete at $3.98 postpaid. Money back guarantee.
CRITERION CO., Dept. BML-59, 331 Church St., Hartford, Conn.

EXPLORE SPACE!

We offer a complete line of reflector telescopes, optics, parts, and accessories for the amateur astronomer and star gazer . . . assembled and do-it-yourself telescope kits . . . optical kits, prisms, binoculars, microscopes, magnifiers, filters . . . free catalog.

BUY DIRECT FROM MANUFACTURER AND SAVE!

ESCO PRODUCTS CO., Oak Ridge, N. J.

TELESCOPE MAKERS

EVERYTHING FOR THE AMATEUR

BUILD YOUR OWN TELESCOPE—EXPLORE SPACE

Thousands of our customers with no special training have built powerful precision telescopes with our quality supplies, instructions, & guidance. So can you. MIRROR MAKING KITS, Eyepieces, etc.

COMPLETE INSTRUCTIONS 10¢—FREE CATALOG

PRECISION OPTICAL SUPPLY CO.

1001 EAST 163rd ST., (Dept. M) NEW YORK 59, NEW YORK

TELESCOPES

Reflectors-Refractors

Complete—ready for use with or without tripods

$3.98 to $475 Up

Also REFLECTOR TELESCOPE KITS

All the necessary parts to build own reflector scopes, parabolic mirrors, achromatic eyepieces, Tripods, all other accessories. Free illustrated literature on request. Dept. ML.

Criterion Co., 331 Church St., Hartford, Conn.

KIT BOATS Boat Plans Patterns Frame Kits

CREDIT TERMS

KIT CATALOGS—Over 50 Models—Preassembled. Runabouts, Cruisers, Fishing (8' to 19'). Anyone can assemble. Complete Marine Accessories, Fiberglass plastics, Trailers, Paint, etc. Also Catalog on 50 Modern Plans and Patterns. Prefab Frame Kits—

SEND 10¢ FOR 2-COLOR(!) CATALOGS

FREE FREIGHT—SAVE ⅔

CRAIG-CRAFT, Tonawanda 1N, N. Y.

Get the right tool for the job! For *free* literature on power tools, write to:

Black & Decker®

Dept. R019, Towson 4, Md.


## Venus

[*Continued from page* 143]

Research Laboratory in this country have received definite radio noise originating from Venus. When amplified, it crackles much like static from a terrestrial thunderstorm. This is very likely the radio frequency portion of thermal energy emission, common to any cool body absorbing heat from the sun.

Venus revolves around the sun in about 225 days. We thus see it alternately in our western evening and eastern morning skies. It follows that if the planet is almost on the other side of the sun from the earth, its phase is nearly full. Its visible diameter is small. At greatest apparent angle of separation from the sun (called elongation), Venus is "largest," like a half moon. That will occur on June 25, 1959. As it swings almost between the earth and sun, we see a big slender crescent. At rare times the planet is seen to transit the face of the sun at inferior conjunction.

**The diameter** of Venus is 7,160 miles, just 300 miles less than the earth. The best estimate of its rotation gives a month-long day, which might create extremes of temperature on the dark and light side. Spectroscopic analysis reveals an abundance of carbon dioxide in the Venusian air but little free oxygen or water vapor. Such conditions are discouraging to the existence of life as we know it and, if anything, indicate a boiling hot climate underneath the clouds. The only answer to some of these problems is for man to penetrate Venus with instrument probes and later to explore it himself. The mass, density and gravity of Venus is approximately 80 per cent of the Earth's.

Venus is by far the brightest celestial object we can see other than the sun and moon. It reaches a magnitude of —4.4, or about 50 times more glittering than a conspicuous star. This means the planet will cast a faint shadow on clear nights and can be spotted with the naked eye in the daytime.—*Peter A. Leavens* •


BUILD YOUR OWN TELESCOPE

If you can repair a leaking faucet, you can make a reflecting telescope. For a complete set of plans, photographs, and instructions that will show you how to construct MI's portable six-inch telescope, send $2.00 to MI Plan Service, Fawcett Place, Greenwich, Conn. Please ask for Plan No. P-6.

GET READY FOR THE SPACE ERA! SEE THE SATELLITES . . . THE MOON ROCKETS

# AMAZING TELESCOPE BUYS

## AND OTHER OPTICAL BARGAINS

**See the Stars, Moon, Planets Close Up!**

### 3" ASTRONOMICAL REFLECTING TELESCOPE

(Famous Mt. Palomar type)

**60 to 180 Power—An Unusual Buy!**

Assembled and Ready to Use! You'll see the Rings of Saturn, the fascinating planet Mars, huge craters on the Moon. Aluminized and overcoated 3" diameter high-speed f/10 mirror. Telescope comes equipped with a 60X eyepiece and a mounted Barlow Lens, giving you 60 to 180 power. Low-cost accessory eyepiece available for higher powers. Optical Finder Telescope included. Sturdy, hardwood, portable tripod. Free with scope: Valuable STAR CHART and 272 page "Astronomy Book."

Stock No. 85,050-B .....$29.95 Postpaid

**KNOW THE TRUTH ABOUT POWER!** Telescope experts will confirm that an Astronomical Telescope will only give you practical powers for to about 50 or 60 times per inch of objective diameter—powers above this only produce empty magnification—make viewing dim, difficult and unsatisfactory.

### 4¼" ASTRONOMICAL TELESCOPE

**Mt. Palomar type! Up to 270 Power**

A fine Reflector Telescope complete with real Equatorial Mount and Tripod and 6X Finder. Aluminum tube, 4¼" dia. mirror, rack and pinion focusing eye-piece holder, 2 eyepieces and mounted Barlow Lens for 40X, 90X, 120X and 270X. Low cost accessory eyepiece available for higher powers. Shipping weight approx. 25 lbs.

Stock No. 85,000-B .....complete, $74.50 f.o.b., Barrington, N. J.

### SAVE! WAR SURPLUS BARGAIN!

### AERIAL CAMERA LENSES

**Gov't. Cost $1218**
**Our Price $39.50 Used**
**$59.50 New**

**Made by B & L and E.K.**
**24" F.L. f/6, in 29" long Lens Cone**

Use as long range, Big Bertha Telephoto lens—for Richest field (wide field, low power) telescope—as Opaque Projector lens—for photographing Artificial Satellites. Mounted in beautiful brass cells, lenses are 4" dia.—precision 4-element type. Aero Tessar and Aero Ektar (no choice). Easily removed. Diaphragm (f/6 to f/22) is included. Opens approx. 1" to 3⅛". Lens and cone—wt. 25 lbs. Sturdy carrying trunk—wt. 26 lbs.

**Order Stock No. 85,050-B, 24", used. Price $39.50 f.o.b. Utah**
**Order Stock No. 85,060-B, 24", new. Price $59.50 f.o.b. Utah**

### PORTABLE JR. PLANETARIUM

**Battery Operated**

Ideal for beginners. Low priced to satisfy the mass interest in the "Geography of Space." Operates on dry cell batteries with bright or medium light intensity. Projects over 60 constellations on ceiling or wall of any darkened room. Complete with flashlight pointer (batteries included)—giant instruction sheet with colorful Constellation Chart.

Stock No. 70,165-B .....$9.95 Postpaid

**PLANETARIUM—for operation on house current**

Stock No. 70,040-B .....$19.95 Postpaid

### MOUNTED BARLOW LENS

Double and triple your Telescope's power with a Barlow Lens. Ours is mounted in chrome-plated, brass tubing with variable spacers—just slide this mounted negative lens into your 1¼" I.D. eyepiece holder, and use your standard 1¼" O.D. eyepiece in it. Fully guaranteed to please you.

Stock No. 30,200-B .....$8.00 ppd.

**New! 2 in 1 Combination! Pocket-Size**
**50 Power MICROSCOPE and 10 Power TELESCOPE**

Useful Telescope and Microscope combined in one amazing, precision instrument. Imported! Telescope is 10 Power. Microscope magnifies 50 Times. Sharp focus at any range. Handy for sports, looking at small objects, just plain snooping. **Send Check or M.O. Satisfaction Guaranteed.**

Order Stock No. 30,050-B .....$4.50 Pstpd.

### SPECIAL! SPECIAL!

**Complete Optical Kit! Build a 6" Reflecting Telescope! (Described in Mech. Illus. Feb. & March 1958 issues)**

Consists of plate glass mirror blank; tool; 2 finely ground and polished lenses to make ½" F.L. eyepiece; first surface diagonal mirror; magnifying lens; 8 abrasives; pitch.

Stock No. 70,154-B ....$9.00 Postpaid

Stock No. 70,004-B . . . Deluxe Kit with Pyrex mirror blank—1" eyepiece lenses .....$11.95 Postpaid

### TAKE PHOTOS of the MOON

**Through Your Telescope with EDMUND**

### CAMERA HOLDER FOR TELESCOPES

Bracket attaches permanently to reflecting or refracting telescopes. Removable rod holds camera over eyepiece to take pictures of Moon . . . or terrestrial telephoto shots of distant objects. White metal projection screen permits you to see the sun spots! Includes brackets, 28¾" rod, projection screen, screws, directions.

Order Stock No. 70,162-B .....$9.95 Postpaid
(Send Check or M.O.—Money-Back Guarantee)

### ERECT IMAGE LOW POWER MICROSCOPE

**5X, 10X, 20X**

**$80.00 Value—Only $19.95**

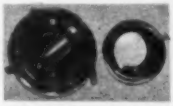
Extremely sturdy with rack and pinion focusing, color corrected optics, turnable microscope body for inclined viewing, three different powers, long working distance under objectives, sufficient eye relief for easy viewing. Made from war surplus optical instrument so that you actually get $80.00 of value. Weighs 4 lbs., 13" high. 10-DAY FREE TRIAL! Accessory objectives available for powers of 15X, 30X, 40X.

Stock No. 70,172-B .....$19.95 Postpaid

### ANASTIGMAT REFLEX CAMERA LENS SET

**Worth $60.00—**

**Our Price $12.50**

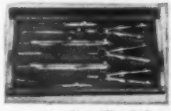


Made for use in $200 American Reflex Camera—now surplus because of a design change. You get both Camera Lens and Shutter and Viewing Lens f/3.5, 83mm f.l., coated. Shutter speeds to 1/400th sec.

Stock No. 30,300-B .....$12.50 per set Pstpd.

### CLOSE OUT! MECHANICAL DRAWING SET

**Regular Price $18.00—Our Price Only $6.00 Postpaid**



American mfr. couldn't compete with foreign imports—thus you get a terrific bargain, even far below import prices. 10 handsome pieces in velvet-lined case. Nickel plated brass—precision American-made. We guarantee you'll be satisfied or money refunded.

Stock No. 50,200-B .....$6.00 Postpaid

Quantity Price: 5 Sets for $5.50 each Postpaid
10 Sets for $5.00 each Postpaid

**BEGINNER'S LENS KITS!** Fun for adults! Fun for children! Kits include plainly written, illustrated booklet showing how you can build lots of optical items.

Stock No. 2-B—10 lenses .....$ 1.00 Postpaid
Stock No. 5-B—45 lenses .....$ 5.00 Postpaid
Stock No. 10-B—80 lenses .....$10.00 Postpaid

### FREE CATALOG-B

***Yours for the asking***

America's No. 1 source of supply for experimenters, hobbyists. Complete line of Astronomical Telescope parts and assembled Telescopes. Also huge selection of lenses, prisms, war surplus optical instruments, parts and accessories. Telescopes, microscopes, satellite scopes, binoculars. Infrared sniperscopes, etc.

***Request Catalog-B***

ORDER BY STOCK NUMBER . . . SEND CHECK OR MONEY ORDER . . . SATISFACTION GUARANTEED!

**EDMUND SCIENTIFIC CO.** BARRINGTON, NEW JERSEY

Are you a guy who didn't

# MARRY THE BOSS'S DAUGHTER?

They tell us it's a good way to get ahead. The tough part is . . . there aren't enough bosses' daughters to go around. But there's another way to call your shots.

How? Look at the want ads! Business and industry are crying for men with special training. 60,000 Engineers–Industrial Supervisors, Communications and Traffic Specialists are urgently needed. Demand has never been greater–or salaries higher–for trained people.

With the right kind of training you can step into one of these jobs – write your own ticket. Without it you must compete with a few million other guys who are in the same boat. And, if times get tough, it's not going to be a good boat to be in.

So act now! Choose the education for men who want to get ahead fast. Pick your future from success-proven I.C.S. courses. Whichever field you choose it will be *right* because all I.C.S. courses are developed by business and industry leaders who know what *you* need to know to go places.

You get *personalized* guidance. Earn as you learn. Study in your spare time – at your own pace. And when you get the coveted I.C.S. diploma, it's the frosting on the cake. Chances are by that time you've already been snapped up for a bigger job with a bigger price tag.

Don't wait another day! Choose your course and send for the free career booklets offered below.

**For Real Job Security—Get an I. C. S. Diploma!** **I. C. S., Scranton 15, Penna.** Accredited Member, National Home Study Council

## INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

**BOX 6705SM, SCRANTON 15, PENNA.** (Partial list of 250 courses)

Without cost or obligation, send me "HOW to SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (plus sample lesson):

**ARCHITECTURE and BUILDING CONSTRUCTION**
- ☐ Air Conditioning
- ☐ Architecture
- ☐ Arch. Drawing and Designing
- ☐ Building Contractor
- ☐ Building Estimator
- ☐ Carpentry and Millwork
- ☐ Carpenter Foreman
- ☐ Heating
- ☐ Interior Decoration
- ☐ Painting Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

**ART**
- ☐ Commercial Art
- ☐ Magazine & Book Illus.
- ☐ Show Card and Sign Lettering
- ☐ Sketching and Painting

**AUTOMOTIVE**
- ☐ Automobiles
- ☐ Auto Body Rebuilding and Refinishing
- ☐ Auto Engine Tuneup
- ☐ Auto Technician

**AVIATION**
- ☐ Aero-Engineering Technology
- ☐ Aircraft & Engine Mechanic

**BUSINESS**
- ☐ Accounting
- ☐ Advertising
- ☐ Business Administration
- ☐ Business Management
- ☐ Cost Accounting
- ☐ Creative Salesmanship
- ☐ Managing a Small Business
- ☐ Professional Secretary
- ☐ Public Accounting
- ☐ Purchasing Agent
- ☐ Salesmanship
- ☐ Salesmanship and Management
- ☐ Traffic Management

**CHEMICAL**
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Chem. Lab. Technician
- ☐ Elements of Nuclear Energy
- ☐ General Chemistry
- ☐ Natural Gas Prod. and Trans.
- ☐ Petroleum Prod. and Engr.
- ☐ Professional Engineer (Chem)
- ☐ Pulp and Paper Making

**CIVIL ENGINEERING**
- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Professional Engineer (Civil)
- ☐ Reading Struc. Blueprints
- ☐ Structural Engineering
- ☐ Surveying and Mapping

**DRAFTING**
- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Drafting Machine Design
- ☐ Electrical Drafting
- ☐ Mechanical Drafting
- ☐ Sheet Metal Drafting
- ☐ Structural Drafting

**ELECTRICAL**
- ☐ Electrical Engineering
- ☐ Elec. Engr. Technician
- ☐ Elec. Light and Power
- ☐ Practical Electrician
- ☐ Practical Lineman
- ☐ Professional Engineer (Elec)

**HIGH SCHOOL**
- ☐ High School Diploma
- ☐ Good English
- ☐ High School Mathematics
- ☐ Short Story Writing

**LEADERSHIP**
- ☐ Industrial Foremanship
- ☐ Industrial Supervision
- ☐ Personnel-Labor Relations
- ☐ Supervision

**MECHANICAL and SHOP**
- ☐ Diesel Engines
- ☐ Gas-Elec. Welding
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Metallurgy
- ☐ Industrial Safety
- ☐ Machine Design
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Professional Engineer (Mech)
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigeration and Air Conditioning
- ☐ Tool Design ☐ Tool Making

**RADIO, TELEVISION**
- ☐ General Electronics Tech.
- ☐ Industrial Electronics
- ☐ Practical Radio-TV Eng'ng
- ☐ Practical Telephony
- ☐ Radio-TV Servicing

**RAILROAD**
- ☐ Car Inspector and Air Brake
- ☐ Diesel Electrician
- ☐ Diesel Engr. and Fireman
- ☐ Diesel Locomotive

**STEAM and DIESEL POWER**
- ☐ Combustion Engineering
- ☐ Power Plant Engineer
- ☐ Stationary Diesel Engr.
- ☐ Stationary Fireman

**TEXTILE**
- ☐ Carding and Spinning
- ☐ Cotton Manufacture
- ☐ Cotton Warping and Weaving
- ☐ Loom Fixing Technician
- ☐ Textile Designing
- ☐ Textile Finishing & Dyeing
- ☐ Throwing
- ☐ Warping and Weaving
- ☐ Worsted Manufacturing

Name _____ Age _____ Home Address _____

City _____ Zone _____ State _____ Working Hours _____ A.M. to P.M. _____

Occupation _____

Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd., Montreal, Canada. . . . Special tuition rates to members of the U. S. Armed Forces.

en
ure
ver
.S.
try
to

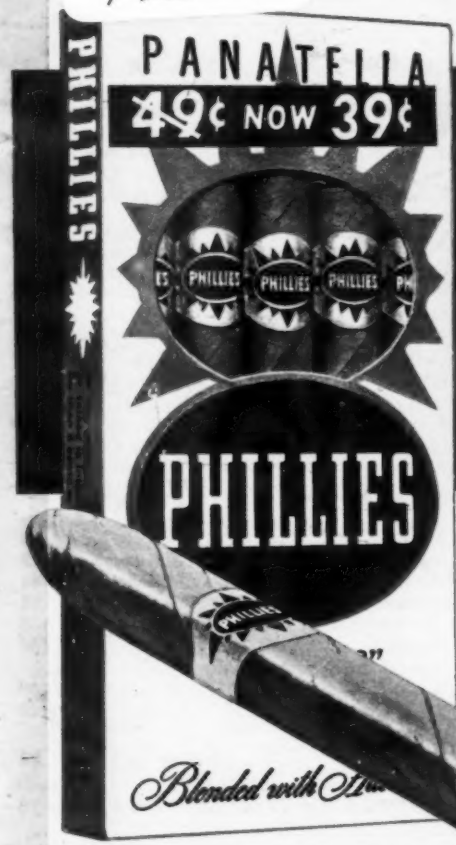
you
wn
.S.
ces
ped

rse
rod

# "MIRACLE MILD" PHILLIES

## Ne[illegible] Selling Panatellas in the U.S.A.

MECH.
12LUS
FEB '59



Cigar and cigarette smokers alike are now enjoying "MIRACLE MILD" Phillies Panatellas — the first cigar mild enough for all smokers.

Never before has smoking offered so much pleasure for so little cost. Pick up a pack today!

**NEW LOW PRICE!**

**5 for 39¢**

*Other Phillies sizes . . .*
IMPERIALS–DOUBLE PERFECTOS–KING SIZE–2 for 25c • PERFECTOS–10c • BLUNTS–5 for 39c • JUNIOR PHILLIES–5c